



Providing Child Survival Services to Rural and Peri-Urban Populations in Bolivia

District 8 of El Alto, Department of La Paz, Bolivia
Montero, Department of Santa Cruz, Bolivia

FINAL EVALUATION REPORT

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A. Summary

1. Brief description of the project

The aim of the project was to reduce child and maternal deaths and morbidity by improving maternal, neonatal, and infant health care services in the proposed project areas. The target areas were peri-urban sites, in the municipality of Montero (Santa Cruz department) and El Alto's District Eight (La Paz department), which includes the neighborhood of Senkata. Montero's three health centers, Villa Cochabamba, Cruz Roja and Clem each offered a variety of health services that included basic maternal and child health, ophthalmic services, dental services and a pharmacy. The five El Alto health centers offered similar maternal, child and dental services.

The project goals were to strengthen the capacity of health volunteers (HVs) through training, and increasing access to child survival (CS) services through home visit and clinical consultations; increase demand for health prevention and treatment services through health education, the Integrated Management of Childhood Illnesses (IMCI) approach, and community maternal and neonatal health care strategies; and, increase the capacity of project personnel, municipal governments and the MOH to successfully plan, budget, implement and evaluate sustainable community child survival services.

The intervention mix was as follows: nutrition and micronutrients – 25%; maternal and newborn care – 25%; control of diarrheal disease – 20%; pneumonia case management – 20%; and immunization – 10%.

These interventions were implemented through Curamericas Global's census-based, impact-oriented (CBIO) methodology of primary health care. The CBIO methodology ensured that all beneficiaries were contacted on a routine basis. Through systematic home visits health volunteers and auxiliary nurses conducted prevention education sessions and gathered health data and information about births, deaths and migration. This process ensured that health care was available to all households.

The second project strategy was to implement IMCI and community-based IMCI (CB-IMCI) within the program areas. CB-IMCI complemented the CBIO methodology and strengthened the capacity of communities to recognize, treat and prevent common childhood illnesses including malnutrition, pneumonia, and diarrhea.

2. Main accomplishments

The main accomplishments of this project were as follows.

- Sustainability of the Child Survival (CS) project is assured. CSRA obtained contracts with the municipal health departments in both El Alto and Montero to manage the health centers and continue with the existing CS programs. In fact there will be a scale-up in both sites in the establishment of birthing centers, which will enable CSRA to improve perinatal care. CSRA and Curamericas Global obtained funding to complete the construction of both centers. The municipal health authorities agreed to equip the centers and provide salaries for the personnel.
- CSRA developed a model for marketing health services to the government that includes child survival interventions. This accomplishment is integrated with the one above. CSRA as a national NGO discovered a way to market health services that fit within

national and municipal norms and procedures. CSRA demonstrated that it could provide services in a cost efficient manner and meet or surpass government performance goals.

- The Montero site achieved a very high rate of completed vaccinations (87%). This site has an effective system for identifying and following up with children who fall behind.
- The relationship with community organizations in Montero is very strong. The community leaders from each catchment area gave a very high rating of the work of CSRA and stated that health services improved over the last five years. They also rated health promotion and prevention services at a higher level than clinical services, indicating that they understood the value of community-based health care.
- The treatment and follow-up care for infants and children with diarrhea and suspected pneumonia improved substantially from baseline to the end of the project. The percent of children who received more liquids and/or ORS more than doubled (43% to 90%) over the life of the project. Similarly the percent of children with suspected cases of pneumonia who received medical care more than doubled (38% to 87%). Thus almost all children receive treatment for diarrhea and pneumonia.

3. Highlights of comparison between baseline and final surveys

As identified in the DIP dehydration from diarrhea and pneumonia were the diseases that had the greatest effect on childhood mortality and morbidity. The project made substantial progress from baseline to the end in controlling these illnesses.

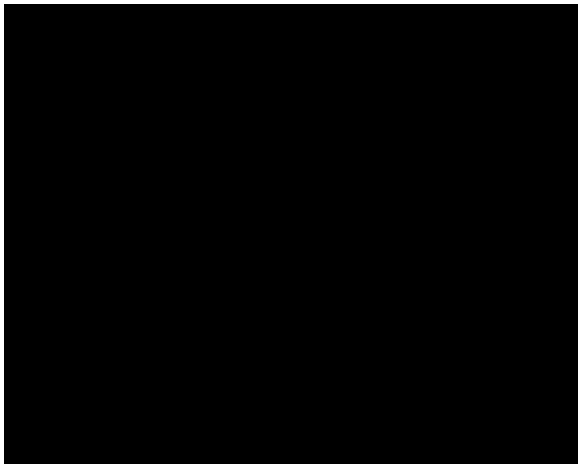
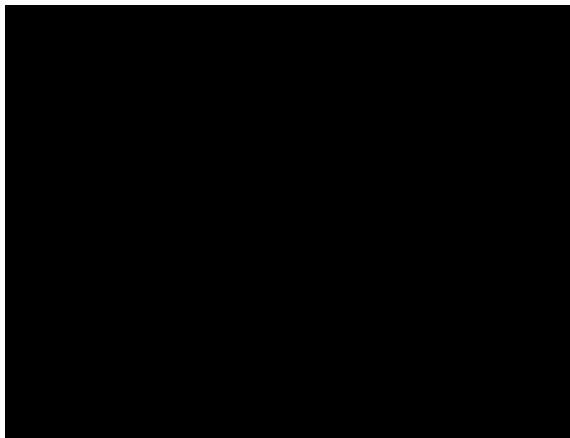


Chart 1 on the left shows that the number of children who were given home treatment in cases of diarrhea doubled and the final rate of 90% indicates that most children receive treatment. This also implies that mothers knew the signs and symptoms of diarrhea. Mortality data from all the health centers supported the value of this finding in that there were no reported deaths due to dehydration in the last 12 months.



The second important contrast between baseline and the end of the project was in care seeking in cases of suspected pneumonia. Chart 2 on left, presents the difference between baseline and final, which was a difference of 39 percentage points. As stated in the previous paragraph, there were no child deaths reported by the health centers, and certainly one factor was mothers' care seeking behavior.

Another important indicator that showed an important difference was in family planning. This indicator was not a priority in the DIP, but because CSRA manages the health centers in the catchment area, it is an indicator which was monitored. At baseline 33% of women stated that they choose to

plan, and at the final evaluation the rate was 70%. This is important because usually it is a behavior that is difficult for women to adopt. One factor identified by the staff was that they did a lot of teaching about the new law that articulates women’s right, including planning when and how many children to have. They took advantage of prenatal groups, prenatal clinic days (Mondays), home visits and community meetings to acquaint people with the law.

Two other noteworthy changes were the increase in the number of women who could identify danger signs in newborn infants and in post-partum women. The increase in recognition of newborn danger signs was from 7% to 62%, and in post-partum danger signs it was from 4% to 52%. The importance of these findings was that the baseline rates were so low. Almost no women could identify two signs at the beginning and at the end more than half could do so.

4. Priority conclusions

- CSRA effectively managed the health centers in both sites. The findings from the final evaluation indicated that the staff understood and applied clinical IMCI and that they participated in quality improvement.
- This project will be sustained after the end of the USAID funding. CSRA developed an innovative model of marketing health services, IMCI in particular, to local government and providing services on a contract basis.
- Three critical interventions in which this project had a high level of achievement were in mothers giving ORS in cases of diarrhea in children, care seeking for suspected pneumonia, and vaccinations (in Montero). Two major factors that affected accomplishment in these areas were the extensive staff and community leaders’ training in IMCI and the well designed BCC strategy.

B. Assessment of results and impact

1. Results: Summary chart

Table 1 below, presents the project’s measurable indicators. The column with the final percentages is color coded. Green indicates that the goal was reached or surpassed. Yellow indicates that progress was made but the goal was not met and in some cases there was not a significant difference from the baseline. Red indicates that the final result was lower than the goal and in some cases the final percent was lower than the baseline. Note that the final results from the Montero site that exceeded 95% were also shaded in green. The final result for hand washing from El Alto was shaded in red because of the low percentage.

Table1: Comparison of measurable indicators baseline to final KPC

Nº	INDICADOR	REGIONS	GOAL	BASELINE			FINAL		
				NUM	DEN	%	NUM	DEN	%
1	% of children who have vaccination card at home	PROJECT	NO GOAL	461	683	67.5%	612	684	89.3%
		EL ALTO	NO GOAL	188	341	55.1%	282	342	82.2%

		MONTERO	NO GOAL	273	342	79.8%	330	342	96.5%
2	% of children who are under weight (2 SD below median)	PROJECT	5.0%	50	571	8.8%	48	684	7.0%
		EL ALTO	5.0%	25	248	10.1%	32	342	10.7%
		MONTERO	5.0%	25	323	7.7%	16	342	4.7%
3	Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	PROJECT	85.0%	119	167	71.3%	117	165	70.9%
		EL ALTO	90.0%	68	84	81.0%	68	88	77.3%
		MONTERO	80.0%	51	83	61.4%	49	77	63.6%
4	Percentage of infants age 6-9 months receiving breast milk and complementary foods	PROJECT	80.0%	57	121	47.1%	130	151	86.1%
		EL ALTO	85.0%	31	63	49.2%	74	88	84.1%
		MONTERO	75.0%	26	58	44.8%	56	63	88.9%
5	Percent of children 0 - 12 months of age who were breastfed one hour after delivery	PROJECT	67.5%	156	339	46.0%	210	342	61.4%
		EL ALTO	67.5%	66	171	38.6%	106	171	62.0%
		MONTERO	67.5%	90	168	53.6%	104	171	60.8%
6	Percent of children 6-23 months who received vitamin A dose in the last 6 months	PROJECT	80.0%	287	516	55.6%	412	591	69.7%
		EL ALTO	75.0%	117	257	45.5%	156	326	47.9%
		MONTERO	85.0%	170	259	65.6%	256	265	96.6%
7	Percent of children 12-23 months who are fully vaccinated	PROJECT	80.0%	118	228	51.8%	223	342	65.2%
		EL ALTO	75.0%	28	94	29.8%	74	171	43.3%
		MONTERO	85.0%	90	134	67.2%	149	171	87.1%
8	Percent of mothers of children 12- 23 months who	PROJECT	40.5%	199	683	29.1%	521	684	76.2%

	know at least 2 danger signs that indicate the need for treatment	EL ALTO	36.0%	82	341	24.0%	331	342	96.8%
		MONTERO	45.0%	117	342	34.2%	190	342	55.6%
9	Percent of children 0-23 months with diarrhea in the last 2 weeks who received ORS and/or recommended liquids	PROJECT	65.0%	111	260	42.7%	202	225	89.8%
		EL ALTO	60.0%	38	104	36.5%	108	125	86.4%
		MONTERO	70.0%	73	156	46.8%	94	100	94.0%
10	Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	PROJECT	65.0%	29	61	47.5%	84	225	37.3%
		EL ALTO	60.0%	12	23	52.2%	47	125	37.6%
		MONTERO	70.0%	17	38	44.7%	37	100	37.0%
11	Percent of children 0 - 23 months with diarrhea in the last 2 weeks who received the same or more liquids during their illness	PROJECT	NO GOAL	158	260	60.8%	176	225	78.2%
		EL ALTO	NO GOAL	50	104	48.1%	97	125	77.6%
		MONTERO	NO GOAL	108	156	69.2%	79	100	79.0%
12	Percent of children 0 - 23 months with diarrhea in the last 2 weeks who received the same or more quantity of solid food during their illness	PROJECT	60.0%	118	260	45.4%	162	225	72.0%
		EL ALTO	60.0%	42	104	40.4%	93	125	74.4%
		MONTERO	60.0%	76	156	48.7%	69	100	69.0%
13	Percent of children 0 - 23 months who had rapid breathing in the last 2 weeks who received treatment from trained personnel	PROJECT	49.0%	41	109	37.6%	126	145	86.9%
		EL ALTO	55.0%	32	78	41.0%	44	61	72.1%
		MONTERO	43.0%	9	31	29.0%	82	84	97.6%
14	Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	PROJECT	75.0%	105	319	32.9%	198	283	70.0%
		EL ALTO	75.0%	58	165	35.2%	110	157	70.1%

		MONTERO	75.0%	47	154	30.5%	88	126	69.8%
15	Percent of mothers of children 0 - 23 months who received at least one prenatal visit in their last pregnancy	PROJECT	90.0%	541	683	79.2%	627	684	91.7%
		EL ALTO	85.0%	228	341	66.9%	288	342	84.2%
		MONTERO	95.0%	313	342	91.5%	339	342	99.1%
16	Percent of mothers of children 0-23 months who received 4 prenatal checks in their last pregnancy	PROJECT	NO GOAL	S/D	S/D	S/D	482	627	76.9%
		EL ALTO	NO GOAL	S/D	S/D	S/D	198	288	68.8%
		MONTERO	NO GOAL	S/D	S/D	S/D	284	341	83.3%
17	Percent of mothers of children 0 - 23 months of age who received orientation during last pregnancy	PROJECT	NO GOAL	336	541	62.1%	587	627	93.6%
		EL ALTO	NO GOAL	143	228	62.7%	256	288	88.9%
		MONTERO	NO GOAL	193	313	61.7%	331	339	97.6%
18	Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child (survey findings)	PROJECT	78.5%	474	683	69.4%	343	684	50.1%
		EL ALTO	70.0%	193	341	56.6%	138	342	40.4%
		MONTERO	87.0%	281	342	82.2%	205	342	59.9%
19	Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child (chart audit)	PROJECT	78.5%	474	683	69.4%	576	829	69.5%
		EL ALTO	70.0%	193	341	56.6%	138	288	47.9%
		MONTERO	87.0%	281	342	82.2%	438	541	81.0%
20	Percent of mothers age 20 - 24 years old who have received 5 doses of TT.	PROJECT	18.5%	S/D	S/D	S/D	53	219	24.2%
		EL ALTO	7.0%	S/D	S/D	S/D	27	127	21.3%
		MONTERO	30.0%	S/D	S/D	S/D	26	92	28.3%

21	Percent of children 0 - 23 months whose birth was attended by trained health personnel	PROJECT	85.0%	461	683	67.5%	546	684	79.8%
		EL ALTO	80.0%	159	341	46.6%	217	342	63.5%
		MONTERO	90.0%	302	342	88.3%	329	342	96.2%
22	Percent of mothers of children 0 - 23 months of age who received Vitamin A in the post-partum period in last pregnancy	PROJECT	80.0%	146	683	21.4%	343	684	50.1%
		EL ALTO	80.0%	60	341	17.6%	115	342	33.6%
		MONTERO	80.0%	86	342	25.1%	228	342	66.7%
23	Percent of mothers of children 0 - 23 months of age who recognize at least two signs of danger of the newborn	PROJECT	37.5%	49	683	7.2%	468	684	68.4%
		EL ALTO	30.0%	26	341	7.6%	152	342	44.4%
		MONTERO	45.0%	23	342	6.7%	316	342	92.4%
24	Percent of mothers of children 0 - 23 months of age who mentioned at least two signs of danger during post-partum period	PROJECT	37.5%	29	683	4.2%	396	684	57.9%
		EL ALTO	30.0%	11	341	3.2%	84	342	24.6%
		MONTERO	45.0%	18	342	5.3%	312	342	91.2%
25	Percent of mothers of children 0 - 23 months who mention at least 2 ways to reduce the risk of transmitting HIV/AIDS	PROJECT	45.0%	164	569	28.8%	390	684	57.0%
		EL ALTO	35.0%	62	267	23.2%	113	342	33.0%
		MONTERO	55.0%	102	302	33.8%	277	342	81.0%
26	Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated.	PROJECT	30.0%	30	683	4.4%	334	684	48.8%
		EL ALTO	30.0%	18	341	5.3%	13	342	3.8%
		MONTERO	30.0%	12	342	3.5%	321	342	93.9%

2. Results: Technical approach

a. Brief overview

There were two fundamental strategies that directed the technical approach of this project. One was the CPIO strategy and the second was IMCI. IMCI had two components: clinical IMCI and community-based IMCI. The CPIO strategy set up a system for identifying high-risk households and conducting systematic follow-up of these households. An important factor in clinical IMCI was that an aspect of CSRA's contract with the municipalities was the management of all the health centers in the project sites. Having management authority, CSRA implemented a staff training and supervision system in clinical IMCI. (Section B.3.c.iii. Health Facility Strengthening, presents an analysis of clinical IMCI.)

b. Progress by intervention area

i. Comparison of baseline and final evaluation

The indicators that met or surpassed the goals and increased from the baseline are shown in the following table. The indicators are listed according to the percent of accomplishment in the final KPC, in descending order.

Table 3: The indicators that met or surpassed the goal and mid-term findings.

Indicator	Goal %	Baseline %	Final %
Children who receive vitamin A (<i>Montero</i>)	85	65.6	96.6
Births attended by trained personnel (<i>Montero</i>)	90	88.3	96.2
Mothers who wash hands (<i>Montero</i>)	30	3.5	93.9
Mothers of children < 2 who received prenatal orientation	NA	62.1	93.6
Pregnant women with at least one prenatal visit	90	79.2	91.7
Children with diarrhea who received ORS and/or other liquids	65	42.7	89.8
Children with vaccination card	N/A	67.5	89.3
Children fully vaccinated (<i>Montero</i>)	85	67.2	87.1
Children with rapid breathing who received treatment from trained personnel	49	37.6	86.9
Infants 6-9 months receiving breast milk and complementary foods	80%	47.1	86.1
Children with diarrhea who received the same or more liquids	N/A	60.8	78.2
Pregnant women with four prenatal visits	NA	NA	76.9
Mothers who know at least 2 danger signs childhood illness	40.5	29.1	76.2
Children with diarrhea who received the same or more solid food	60	45.4	72.0

Women who practice child spacing	75	32.9	70.0
Mothers recognize 2 danger signs in newborns	37.5	7.2	68.4
Mothers recognize 2 danger signs post partum	37.5	4.2	57.9
Mothers recognize 2 ways of transmitting HIV/AIDS	45	28.8	57.0
Mothers ages 20 – 24 with 5 doses of TT	18.5	NA	24.2
Under-weight children (Montero)	5	7.7	4.7

The above results indicate there was improvement in the areas of vaccinations, diarrhea management, pneumonia management, birth spacing, mothers’ knowledge of danger signs, prenatal care and nutrition. Thus there was improvement in all of the planned interventions.

In terms of childhood morbidity and mortality in Bolivia an important accomplishment of the project was in the treatment and follow-up care for infants and children with diarrhea and suspected pneumonia. Both of the indicators for these illnesses improved substantially from baseline to the end of the project. The percent of children who received more liquids and/or ORS more than doubled (43% to 90%) over the life of the project. Similarly the percent of children with suspected cases of pneumonia who received medical care also more than doubled (38% to 87%). Thus almost all children received treatment for diarrhea and pneumonia.

Another noteworthy change was in child spacing. The percent of women who practiced this intervention increased from 33% to 70%. This is a difficult behavior for women to adopt because of cultural and religious norms in the Aymara and Quechua cultures. In interviews with mothers and pregnant women during the final evaluation they acknowledged that they faced opposition, primarily from *machista* attitudes that only husbands should make these decisions. Women stated however, that they persisted and the final result validates that they were able to proceed. In both sites the most common birth control method was Depo-Provera.

In support of the behavior changes noted above, mothers also increased their ability to recognize danger signs of childhood and perinatal illnesses. A factor that contributed to this was that the staff in both sites are bi-lingual so mothers were able to received health messages in Aymara or Quechua if they so preferred. In the household census that was done in District Eight (El Alto) over 40% of adults stated that they preferred to discuss health messages in Aymara.

The following table presents indicators that demonstrated progress but the goal was not met and in some cases there was no difference from the baseline.

Table 3: Indicators that demonstrated some progress but little or no difference from the baseline.

Indicator	Goal %	Baseline %	Final %
EBF	85	71.3	70.9
Newborns breastfed within 1 hour of delivery	67.5	46	61.4

Births attended by trained personnel (El Alto)	80	46.6	63.5
Mothers who received vitamin A post-partum	80	21.4	50.1
Children vitamin A dose in the last six months (<i>El Alto</i>)	75	45.5	47.9

The EBF rate was affected by the economic necessity of mothers to work. Both of the project sites are populated by immigrants from the rural area. They immigrated because of the possibility of employment for wives as well as husbands. Their financial needs conflicted with the importance of EBF. The project staff stated that after three months mothers tend to leave their infants at home with a care taker. Expressing mothers' milk is a very foreign idea in these cultures, and especially in Montero mothers don't have a way to store milk in the tropical climate. This is a problem that existed in most peri-urban areas.

The lack of substantial change in vitamin A dosing in El Alto reflected the problem of population growth out stripping the capacity of the project. (This issue is discussed in more detail in the following section of the report.) In contrast a recent chart audits in Senkata Health Center showed that over 80% of children 6 to 23 months old had received a vitamin A dose in the last six months. One factor that could make a difference is if the MOH would authorize trained personnel to distribute vitamin A capsules during home visits. At this time the norm is that the capsules can only be distributed in the clinic.

A barrier that inhibited mothers giving breast milk right after delivery was the habit of maternity hospital nurses immediately taking the newborn to the nursery. CSRA staff attempted to effect a policy change but with no success. One of the many benefits of birthing centers in both sites will be that CSRA can implement correct perinatal protocols.

In El Alto a majority of women gave birth at home because the maternity hospital was overloaded. Mothers preferred to deliver at home instead of on a cot in the hospital's hallway. The over-crowded conditions also created an uninviting atmosphere where *campesinos* tended to not receive respectful care.

The table on the following page shows the areas in which the project did not achieve good results.

Table 4: Indicators that were substantially lower than the goal and in some cases the final percent was lower than the baseline.

Indicator	Goal %	Baseline %	Final %
Under-weight children (El Alto)	5	10.1	10.7
Children fully vaccinated (El Alto)	75	29.8	43.3
Sick children who receive increased fluids and solid food	65	47.5	37.3
Pregnant women with 2 doses of TT	78.5	69.4	50.1
Mothers who wash hands (El Alto)	30	5.3	3.8

There was a slight, but not significant, increase in under-weight children under 2 years of age in El Alto. One factor that affected the lack of progress was the poverty of the residents in District Eight. It was common for families to only eat two meals a day, breakfast and supper. Additionally in most households both parents worked or spent the day looking for work. They tended to leave their young children at home with an older sibling or a relative and make no provision for a mid-day meal or snacks.

Another factor that affected progress in under-weight children was that the growth in population over the last five years outstripped medical services and the ability of the project staff to provide coverage as planned. New neighborhoods materialized beyond the catchment area of the five health centers in District Eight, making it difficult for residents to get to a health center on a timely basis. There was no bus service within many of the neighborhoods and taxis cost more than most people were able to pay. Additionally the population growth out stripped capacity of the project to visit every household on a regular schedule as planned in the CBIO strategy. Between 2002 and 2007 the population in District Eight increased 27%, which represents over 13,000 new residents. Consequently there were cases of under-weight children who were not taken to the health center on a timely basis and there was no documentation to indicate that staff needed to follow-up.

As seen in Table 4 above, the percent of children who were fully vaccinated in El Alto was low. Upon further examination however, in the sub-sample of children 12 to 23 months old who were fully vaccinated by their 13th month of age, the completed vaccination rate was 73%. In other words 73% the children who were 12 and 13 months old at the time of the final KPC were fully vaccinated. This finding indicates that the vaccination rate increased significantly in the last year. If this trend continues one could expect that next year the completed vaccination rate of all eligible children would be 73% or higher. As discussed in other sections of this report, there were barriers in El Alto that did not exist in Montero, but in this intervention the El Alto team was making good progress.

In regards to the percent of pregnant women who received two doses of TT, the evaluation team found that one of the reasons for the low documentation was that 43% percent of women did not have their vaccination cards when interviewed for the final KPC. Thus they were counted as not having been vaccinated. The primary reason was that the cards were lost. In the future it would be good to compare KPC data with chart audits in order to obtain a more accurate understanding of the actual rate.

Finally the percent of women who washed their hands in El Alto was only 4%. The criteria for a positive notation was that mothers had to wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated. A factor that affected adherence to this practice was the lack of water supply. The population growth exceeded the municipality's ability to provide water to all the new neighborhoods. The lack of water supply however, does not account for the fact that 96% of women did not wash their hands in all instances.

Recommendation: The El Alto team should conduct a qualitative study to identify the reasons for not washing hands, and then design IEC materials that address the barriers and perspectives of the population.

ii. Factors affecting achievement of objectives and outcomes

The project had two very different sites. Montero is in the eastern lowlands and has a tropical climate. Many of the residents are recent immigrants, who are primarily Quechua. The catchment area is semi-urban. El Alto is on the Bolivian *altiplano* at 14,000 feet above sea level. The population is primarily Aymara. The climate is cold and the air is dry. There is very little vegetation. It is also semi-urban.

The most predominant factor that differentiated the project sites was the highly politicized environment in El Alto. One of the effects was that the selection of the health volunteers was based on party affiliation and political leaders wanted to use them for political ends which affected their ability to do health promotion. As a result the project had to drop most of the volunteers. This in turn caused a major limitation in the implementation of the CBIO strategy. The loss in manpower meant that every household could not be visited once every two months as planned. The project leaders modified their approach by only implementing the home visitation plan in the catchment areas of three health centers: Senkata, Mercedes, and Atipiris. At-risk households were visited at least once every two months, in some cases more often based on the need for following up a newborn, or a case of pneumonia, etc. In these catchment areas the staff used the HIS system to track at-risk cases and conducted follow-up as planned.

In the rest of District Eight staff members visited every household with children under two and pregnant women three times a year. The health topics addressed in these visits were determined by the staff as opposed to the needs identified by the HIS. Of course if the home visitors found an ill child they addressed that issue as warranted.

One of the tactics used to ameliorate the lack of staff was to make an arrangement with the school that trained nurse auxiliaries to provide practicum experiences in District Eight. Consequently every three months a cadre of nursing students were assigned to work with CSRA. The staff trained them in C-IMCI and CB-IMCI and then they rotated through the clinics and community work. Nursing students were helpful, but limited because of the need to train a new group every three months and because of their lack of knowledge of the area and the culture.

In contrast, the health volunteers in Montero functioned as planned. The project and health center staff members were able to implement the CBIO strategy throughout the whole target population. This is likely one reason why the Montero site experienced more positive outcomes than El Alto.

The politicized environment in El Alto also affected community organization. Neighborhood committees (*juntas vecinales*) were consumed with political matters and had little time for health care issues. The evaluation team attempted to conduct a group interview with the committees using group dynamic techniques but the participants were not interested in following along. They ignored the question posed by the evaluator and proceeded with their own agenda. Another effect of the local politics was that committee members typically would not keep their position for long. Consequently CSRA was not able to build consistent relationships and help them understand the project's health care strategy.

In contrast the neighborhood committees in Montero were committed to health care, and most of the leaders had been in their position throughout the life of the project. (A report on their assessment of the project is found in section B.3.a. Community Mobilization.)

iii. Main success and lessons learned (for each intervention)

Nutrition and micronutrients – 25%

The Montero site experienced a reduction of severely underweight children from 7.7% to 4.7%. The evaluation team attributed this to the HIS system and the CPIO strategy. When an underweight child was identified in the clinic the care taker was visited the next day by a nurse or health volunteer. A reason for the malnutrition rate not being even lower was the continual influx of new immigrants. It sometimes would take a while for them to be integrated into the health management system.

The vitamin A dosing rate in Montero was very high for the same reason (97%). Additionally the health centers in Montero scheduled Monday's as a MCH day and the staff took this opportunity to check on health promotion interventions such as vitamin A. The success of the MCH clinic day was a lesson learned for the project.

In regards to EBF, a major barrier was the fact that most mothers worked and tended to leave their infants at home after three months of age. A lesson learned was that the project needed to address this barrier and possible solutions in their IEC strategy.

In El Alto the evaluation team interviewed 27 mothers from three different health centers. In recognition of the relatively low rates of EBF, one of the questions they asked was the appropriate age at which complimentary feeding should begin. Mothers were given a list of ages to choose from. It was encouraging to find that 100% of them identified six months of age. This is an indication that mothers may have the necessary knowledge, but circumstances do not permit them to adopt this behavior.

Maternal and newborn care – 25%

A success was the high percentage of mothers who could identify at least two danger signs in newborns and in mothers' post-partum. These two indicators had the highest difference between baseline and final evaluation: identification of newborn danger signs from 7% to 62% and post-partum signs from 4% to 52%. This is evidence of the effectiveness of the BCC strategy and of the staff's ability to speak to mothers in their preferred language.

Because of the procedures at the maternity hospital mothers who gave birth there were not able to give breast milk within the first hour of birth. In order to assess if pregnant women knew of the value of this practice the evaluation team interviewed pregnant women in El Alto about this practice. They interviewed 17 pregnant women and asked them to identify the benefits of immediate breastfeeding from a list of options. All 17 chose at least one correct answer. The two most frequent choices were that this milk contained vitamins and protein (15 of 17) and that it should be the only nutrient for the first six months (14 of 17). A matter of concern however, was that two of 17 women said that colostrums could also produce diarrhea and two said that it could cause colic and stomach aches. The El Alto team took note of these findings and committed to addressing these misperceptions.

In both sites the evaluation team interviewed pregnant women about the benefits of prenatal care. A combined total of 44 were interviewed. The evaluation team used the technique of presenting a role play that portrayed the positive, or correct reasons for getting prenatal care and a second that portrayed common reasons for not doing so. The women were then asked to identify what they thought were the correct and incorrect reasons for prenatal care. All of the pregnant women identified appropriately the correct and the incorrect reasons. It was clear from the discussions of the role plays that these women understood the value of prenatal care and rejected traditional reasons for not doing so.

Family planning was included within this intervention and as discussed earlier there was a substantial increase in the number of women who chose to adopt this practice. The evaluation team attributed some of the success to the inclusion of family planning in the monthly prenatal classes and teaching mothers about the law of women's rights, including the right to decide when they would have babies.

In Montero the evaluation team followed up on family planning practice by asking pregnant women to identify the benefits of family planning. They interviewed 27 pregnant women. Using a brainstorming technique, participants made a list and then chose the reasons that made the most sense to them. The most frequently chosen reasons were that it gave them more time to work, they could take better care of their current children and it allowed women to take better care of themselves.

The evaluation team also asked them about barriers to family planning. The most frequently mentioned barrier was that husbands were opposed (9 of 27). When asked why they did it any way they commented on the Bolivian law of women's rights, and the burden of having more children.

Control of diarrheal disease – 20%

The project achieved success in teaching mothers about the danger signs of diarrhea and the use of oral rehydration. The evaluation team attributed this to the HIS system and the home visiting system that tracked and immediately followed up cases at home.

The findings in the KPC were confirmed in interviews with mothers. In Montero the evaluation team interviewed 104 mothers and 95% of them identified taking a sick child to the health center and giving ORS or more liquids as actions that should be taken when a child has diarrhea. In El Alto the team interviewed 27 mothers and all of them identified giving more liquids (ORS, more breast milk, water or herbal tea) as the correct action when a child has diarrhea.

Pneumonia case management – 20%

Similar success was achieved in this intervention as in diarrhea management, for the same reasons. The project developed an effective monitoring and follow-up system for pneumonia management, which is described later in this report.

The evaluation team also asked mothers in El Alto about the signs of pneumonia. They were shown pictures that represented a variety of symptoms. Nearly all of them, 24 of 27 (89%) identified rapid breathing. The importance of this finding is that they simply did not respond to a

yes or no question; they had to analyze the pictures and chose among alternatives. It was also a validation of the IEC materials as mothers immediately recognized the symptoms that were represented in the pictures.

Immunization – 10%

The Montero site achieved a childhood vaccination rate of 87%, an increase of 20 percentage points from the baseline. In El Alto the rate from the final KPC was 63% for the sub sample of children 12 to 23 month who were fully vaccinated before 13 months of age. (The factors that affected a lower rate in El Alto were discussed earlier in section B.2.b.i. Comparison of Baseline and Final Evaluation Surveys.) The evaluation team attributed much of the success to the HIS system that identified children who were behind schedule and were typically followed-up within two weeks.

Because of the lower vaccination rates in El Alto the evaluation team asked the 27 mothers to identify the age at which they thought children should be completely vaccinated. Mothers were given a list of options and asked to choose the age they thought was correct. The results were that 19 of 27 (70%) identified 11 months as the correct age. The one age that drew the second most number was at 2 years old, where four mothers made this choice. Although the sample of mothers was small, the CSRA El Alto team was encouraged that a relatively high proportion of mothers knew the correct age. On the other hand, the fact that two years of age was also chosen gave the team an understanding of a potential misunderstanding, which they committed to address in the immediate future. However, according to the Ministry of Health, it is accepted that vaccinations be completed between 12 and 23 months of age, although the ideal age is before 13 months.

iv. Unexpected successes

One area in which there was more success than expected was in the participation and support of the neighborhood committees in Montero. While the Montero team knew that the project had strong support from the committees, it was a gratifying finding to learn that the committees thought that health care had improved in all areas over the last five years. (This finding is discussed further in Section B.3.a. Community Mobilization, later in this report.)

Another area in which there was more success than expected was in health center staff's application of clinical IMCI and participation in quality improvement. While CSRA expected improvement, it was more than expected. The fact that almost all health center doctors and nurses in both sites did so is a strong indication of the effectiveness of CSRA's management of the health centers. (This finding is discussed in more detail in B.3.c.iii, Health Facility Strengthening.)

v. Application of lessons learned to future activities

One of the lessons learned was the value of sharing data with neighborhood committees. At first it seemed that the data overwhelmed community leaders, but after a time they began to understand what the numbers meant. Especially in Montero, the community leaders felt empowered because they could cite meaningful statistics. The staff members were committed to continuing the regular meetings with these committees after the project is over.

Another lesson is the value of well designed IEC materials. Many of the measurable indicators were low at the mid-term evaluation and one factor that was identified by the team was the poor quality of these materials. CSRA contracted with a local consultant and did a major up-grade. At

the final evaluation the staff cited their IEC materials as one reason for the good final outcome of the project.

The staff cited value of all staff having the same vision for health care as an important lesson learned. As reported later in the report on strengthening the grantee organization, CSRA made a major investment in training all staff in IMCI and the CBIO strategies, and in creating a staff development system. As a result, whether in the patient exam room or in a family's home the focus was the same. This system is now institutionalized and will continue after the grant.

In the El Alto site there was a disconnect between health care providers and the largely Aymara residents at the beginning of the project. One of the interventions that CSRA implemented was cross-cultural training workshops. As a result of the workshops patient satisfaction with health center services rose substantially. Interestingly enough staff satisfaction also increased. In the final evaluation 16 of 18 health center staff stated that they applied cross-cultural techniques in their work. This is an area in which CSRA committed to staying current, with continuing education.

vi. Potential for scale-up

This project has strong potential for scale-up. CSRA has contracts in place to continue managing the health centers in Montero and El Alto (District Eight). The contracts include implementing the CS interventions in this project. In both sites construction is nearly completed for birthing centers. Given that the maternity hospitals in both areas are over-crowded, the birthing centers will fill an acute need. Just as important will be the provision of quality perinatal care. For example one of the problems noted earlier in this report was the procedure in the maternity hospitals of taking newborns from their mother immediately after birth. In the birthing centers newborns will be put in the mothers' arms and given the breast immediately.

Another area where there will be scale-up is in reduction of malnutrition. The MOH has a contract with BID (*Banco Internacional de Desarrollo*) to implement a *Zero Malnutrition* program. CSRA has a sub-contract with BID to carry out implementation of a pilot project as part of this program at the Senkata Health Center using the CBIO Methodology. This contract between CSRA and the MOH will further support scale-up of child survival programs.

CSRA also has potential for scale-up based on an extensive household census of District Eight that is near completion. The census has demographic, housing, education, economic, and health data on all residents. CSRA will be able to use this census to leverage selling health services to the El Alto municipality and to applying for more grants.

c. New tools and approaches

CSRA has a long history of working in rural areas. The Montero and El Alto sites were the first urban area for the organization. In the rural areas CSRA and Curamericas Global pioneered the CBIO strategy, but it was something new in urban settings. CSRA staff found that they needed to make some adjustments, especially because of the rapid population growth which out stripped their ability to serve every household according to the strategy. Never-the-less CBIO is a strategy that is conceptually sound and ensures that all beneficiaries are served as planned.

3. Results: Cross-cutting approaches

a. Community mobilization

Community mobilization was a strength of this project, especially in Montero. One community-based organization that the project staff worked with was the neighborhood committees (*juntas vecinales*). These are political organizations that interface with municipal government and advocate for basic services in their neighborhoods. CSRA involved these groups in planning at the beginning, and then set up a system of regular reporting and program planning.

In Montero the evaluation team conducted a group interview with nine leaders who represented eight committees. Using the nominal group technique they were asked to list the project's accomplishments. They came up with a list of 16 accomplishments. They were then asked to individually rate their level of satisfaction with each accomplishment, using a scale of 1 (low) to five (high). Table 5 below presents those with the highest rating. It is important to report that all remaining accomplishments received a rating of 4.0 and above, thus they had a high level of satisfaction with all of the project's interventions.

Table 5: Accomplishments identified by neighborhood committees in Montero. N=9

Accomplishments	Level of Satisfaction (five point scale)
Prenatal care	4.7
Home visits	4.5
Women's health	4.5
Better service in the health center	4.5
Personnel trained	4.5
Preventing the most prevalent illnesses	4.5
TB control	4.5

In turn the committees were asked to identify their tasks in health care and state if CSRA helped them in any of them. They came up with a list of ten tasks and stated that CSRA helped them to make progress in all except one. This one task however is not something that CSRA was equipped to address. The list is found in the table below.

Table 6: Committee tasks and level of assistance from CSRA. N=9

Tasks	Assistance from CSRA
1. Request funding for health care personnel	Helped to increase
2. Request maternal and school-child social security health care	Helped to increase
3. Construct a birthing center at Cruz Roja health center	Helped to increase
4. Conduct health education in community meetings	Helped to increase
5. Organize for vaccination campaigns	Helped to increase
6. Promotion of the use of soy products	Helped to increase
7. Conduct analysis of the community's health status	Helped to increase
8. Implement health fairs	Helped to increase
9. Meet monthly with health center directors	Helped to increase
11. Insect spraying	No assistance

The Montero committee members were unanimous in their belief that CSRA helped them to understand and improve their role in health care.

The relationship with the neighborhood committees in El Alto was affected by the constantly evolving political environment in that area. Most, if not all, committees were organized based on political parties, and consequently the agenda for community meetings was dominated by party politics. The one exception is the neighborhood where the *23 de marzo* health center was located. The president of that committee believed that health care was very important, to the extent that he has raised funds for the reconstruction and expansion of the clinic. He used the health care data provided by CSRA as a tool in obtaining funding from the municipal government.

The evaluation team also conducted a group interview with committee members in El Alto, attended by 12 people. Less than half of the committees had a health secretary, and those that did have the person in that role did not remain for long. They were unanimous in that their lack of attention to health care was not a fault of CSRA. When asked for a solution to the problem they suggested that CSRA organize a workshop for health secretaries, with periodic continuing education. They felt that this would increase the prestige of the position, both in the eyes of the person in the role, and with the neighborhood committee as a whole. The CSRA staff responded very positively to the recommendation and planned to implement it.

b. Communication for behavior change

After the mid-term evaluation CSRA contracted with a local consultant to redesign their BCC strategy. As a result they had pamphlets, flyers, posters and banners centered on key health messages for each of their interventions. Additionally CSRA used their messages in radio spots at both sites. The printed materials were well designed, using photographs and drawings of local people to demonstrate the behavior in the health message. The materials made good use of white space and limited the amount of text.

CSRA staff had a well designed strategy that linked IEC materials with the CBIO and clinical IMCI strategies. Home visitors always took relevant flyers and pamphlets with them and were the primary means for teaching and reinforcing health messages. Women and family members could keep the flyers if they so chose, which was almost always the case. Almost all health communication was done using the IEC materials.

The same IEC materials were prominent throughout the health centers. Posters and banners were in the waiting rooms, foyers and exam rooms. Exam rooms and nurses stations had racks with flyers for each of the health messages so that the health care providers could integrate health communication with medical care.

The evaluation team used some of the photographs and drawings to assess women's knowledge of symptoms and practices. The respondents readily identified the messages represented by pictures, providing added evidence that the graphics effectively communicated the health messages.

Thus far the IEC materials were used to communicate messages. Staff used the materials inductively, asking learners to express what they saw in the pictures and then led a discussion about the message. This is a sound adult learning method. In the future however, the project staff could take the next step and use their IEC materials to engage learners in discriminating among

alternatives and in making significant choices. These methods engage learners in higher levels of learning and enhance their empowerment. One example would be to ask learners to pick out the relevant signs and symptoms, say for suspected pneumonia, from symptoms of other illnesses. Another example is to use pictures that portray choices that mothers have to make about health care and let them come to their own conclusions. The CSRA staff experience examples of these methods during the final evaluation, in interviews with pregnant women, mothers and community leaders.

c. Capacity building approach

i. Strengthening the grantee organization

CSRA leaders made good use of the grant to strengthen the organization. As described above, they used a consultant to develop a strong BCC program. They sent staff for training in how to use the Health Facility Assessment tool that was developed by BASICS, and then applied the methodology with their health centers. The benefit to CSRA was a definition of the strengths and weaknesses of the health centers, and also served to train health center staff in how to continue the assessment process. The major area of improvement instituted in the health centers was to improve the protocols for assessment and documentation of patients' health status. For example the centers now have norms for obtaining the same set of vital signs for all patients. The findings also established a baseline for continuous quality improvement projects.

A system for continuous quality improvement (CQI) was another area that CSRA developed with support of the grant. The outcome of this system was a very high rate of participation by the health care providers in CQI. The evaluation team surveyed 18 providers in El Alto and 18 in Montero. In El Alto 15/18 providers participated in a CQI project in this year, and 17/18 in Montero did so. This was a strong indication that CQI was institutionalized in CSRA health centers.

Another area that was strengthened was staff development. CSRA created a rather sophisticated system of team-based personnel evaluations and staff development plans. This system is described in further detail later on in this report (Section C.3.a. Adequacy of Supervision System). While the kinks were still being worked out at the time of the final evaluation, the supervisors at both sites stated that they obtained positive results from the first cycle of staff evaluations. A fundamental benefit according to them was that it was a 180 degree shift from the punitive staff evaluation system that is typical in the Bolivian public and private sectors.

An important capability for the future was the development of a system for doing population census in an urban setting. With consulting assistance from a local firm CSRA developed a census taking tool that provided data on household members' age, sex, health status, education, income, home ownership/rental, length of stay, languages spoken, preferred language for talking about health, etc. The grant also supported the development of a database for managing the census data. At the time of the final evaluation CSRA was about 80% done with a census of the population in District Eight in El Alto, which is the catchment area for the El Alto site. The importance of this census is that the data can position CSRA to negotiate a new contract with the municipal health department with current and in depth data on the population to be served. CSRA will have the best data available and will be able to monitor population-based health indicators better than the government or any other agency. It will put CSRA in a very strong position for sustaining this project.

CSRA also used the grant to develop an electronic system for ordering, inventorying, and distributing medications and medical supplies for its health centers. Using tools such as MS Sequel Server and Crystal Reports the whole system was managed electronically. Bids for medication orders were compared electronically so that the best quotes were identified immediately. Order forms, inventory sheets, shipment lot records, etc were all generated electronically and recorded in a database. It was an impressive system and positioned CSRA to be very efficient, and cost-saving, in managing medications and supplies.

ii. Strengthening local partners organizations

An important local partner was the neighborhood committees. As discussed earlier in the report the committees in Montero stated that CSRA helped them increase their understanding of health care, of how to use data for planning, and in their planning skills.

Another partner for both sites was local secondary schools. The evaluation team interviewed three school directors in Montero: Guillermo Kruger, Daniel Rivero, and Fe y Alegria. They said that overall there was a much needed consciousness of health behaviors, both in understanding risk behaviors and in preventive behaviors. The most noteworthy accomplishments were in the host of health related activities that go on in the schools: the schools sponsor vaccination campaigns, sponsor training in controlling STI, sponsor health fairs, discuss health issues in parent-teacher meetings, and sponsor dental and eye screening.

The evaluation team also surveyed students in both Montero and El Alto. In Montero the team surveyed 72 students from four schools. The students were ages 15 to 17 years old. Seventy one of 72 said that they heard about HIV/AIDS in school. Students were asked to identify three ways to prevent HIV/AIDS. All the students mentioned at least one way. The following table presents the breakdown on the number of students who could identify three, two and one way to prevent HIV.

Table 7: Number of students who could identify three, two and one way to prevent HIV. N=72

Number of Ways to Prevent HIV	No.	%
Able to name 3 ways	43	55%
Able to name 2 way	24	36%
Able to name 1 way	5	8%

The fact that 91% of the students could name at least two ways of preventing the spread of HIV is a good indicator that students have a good foundation of knowledge about prevention. It is also a good sign that all students could identify at least one way of prevention.

Students were also asked to name their sources of information about HIV and other STIs. The three sources that they mentioned were in school, the CSRA health centers and health fairs at school. Thus students know about prevention and they learned about it because of CSRA’s involvement in school.

Finally students were asked with whom they shared information about health. Only one student said with no one. All the other students said they did so with family members (51 responses) and friends (44 responses).

In El Alto the evaluation team surveyed 95 students from three schools. All of them stated that they heard about HIV/AIDS in school. All the students stated that they could identify ways to prevent the spread of HIV, however 11 of 92 identified two incorrect ways: not talking with people who are infected (3 respondents) and not using public swimming pools and bath rooms (8 respondents).

Table 8: Number of students who could correctly identify three, two and one way to prevent HIV. N=81

Number of Ways to Prevent HIV	No.	%
Able to name 3 ways	13	16%
Able to name 2 way	33	41%
Able to name 1 way	35	43%

Of those who correctly identified prevention methods, table 8 presents the number who could identify three, two and one way to prevent HIV.

In El Alto a lower percent of students could identify three ways. Most students identified one or two ways of prevention. It is a matter for follow-up that 11 of 92 students had incorrect understanding of prevention methods. The CSRA staff should do further research to see how wide spread these erroneous ideas are. It will be important that they develop IEC materials that

clarify how HIV is transmitted.

d. Health facility strengthening

i. Strengthening health worker performance

Both sites had volunteer health workers, although the El Alto’s volunteers were affected by political movements in that municipality. Volunteers associated with the Senkata and Mercedes health centers did continue to serve throughout the project. In El Alto the evaluation team interviewed the volunteers from Senkata. All of them were trained in all of the interventions. They stated that the greatest benefit of their training was for themselves. They felt that they were very capable in caring for their family’s health. The health activities that they did the most were following up with pregnant women and newborns, following up with malnourished children and orienting mothers about pap screening and family planning.

In the Montero site the health volunteers functioned freely. The evaluation team interviewed ten of them. All were trained in IMCI and vaccination monitoring. In their assigned neighborhoods they had an average of 110 families in their catchment areas. Seven of ten stated that they visited over half of the families in the last month. Two stated that they did not do home visits in the last month. All of them stated that the benefit to the community of their work was early detection of children’s illness, following up on vaccinations and follow-up with pregnant women. The volunteers in Montero and El Alto expressed a good to high level of satisfaction with their work, and planned to continue as volunteers.

The number of households per volunteer in Montero should be reassessed. A fundamental component of the CBIO strategy is household visitation. An average of 110 households per volunteer is high, and considering that they volunteer their time, it is a lot to ask of them. The auxiliary nurses also do regular home visits, but there are not enough of them to provide consistent coverage. One factor that ameliorates this situation is the excellent monitoring and follow-up system at the health centers. For example, data from the final KPC indicated that 98% of children with rapid breathing were taken to the health center. Never-the-less the regular contact with households through home visits is an important part of community health

surveillance. CSRA should consider increasing the number of volunteers so that they have a more reasonable number of households in their catchment areas.

ii. Training

CSRA implemented a wide range of training. As reported in other sections of this report, all health center staff were trained in clinical IMCI, the volunteers were all trained in the planned interventions, secondary students were trained in risk factors and prevention, neighborhood committees (in Montero) were trained in data analysis and planning and CSRA as an organization was trained in a number of administrative areas. CSRA made good use of grant funds to develop skills and capacity broadly throughout the community and in its own organization.

e. Sustainability strategy

i. Accomplishment of goals and objectives

As a result of the “Law of Popular Participation,” the Bolivian central government designated funds to the municipal governments for investment in productive infrastructure, education, health, culture and sports. The national government determined that 6.4% of these devolved funds be set-aside for the Basic Health Insurance program. According to this plan, public sector providers are reimbursed for the costs of medicines and supplies for a list of about 70 activities, most of which are related to maternal and child health and illness. This is called the SUMI program.

Sustainability of this project has been assured because CSRA was able to contract with the municipal health departments using SUMI funds to continue providing health services, including CS. Because of efficient management CSRA was able to maximize the reimbursement from the health departments and shift the costs of the project from USAID funds to its local accounts.

ii. Status of phase-over plan

In this project the issue is not phase-over, rather continuation of services because CSRA will continue to provide health services, include the CS interventions after the USAID grant is finished. As stated above CSRA will continue to provide services at the same level into the near future.

iii. Financial sustainability

The financial sustainability strategy was based on the model of selling services to the municipal health departments. CSRA contracted with the health departments in El Alto and Montero to manage the health centers in the CS project catchment areas. CSRA demonstrated over the last five years that it can manage the health centers efficiently and with a higher level of quality than the government run health centers. The quality performance included implementing MOH sponsored strategies such as clinical IMCI, when government health centers struggled to do so. This track record convinced the municipal health departments that it is to their advantage to continue contracting health services with CSRA.

iv. Demand for services and community participation

Demand for services increased over the five years of the USAID-funded project. Part of increase in demand for services was due to the growth of the population in the project’s catchment area. Because of the continued influx of new residents there was a growing need for CS interventions.

In El Alto CSRA used data on increased demand to obtain funds for increasing the clinic hours in three health centers. In one center, *23 de Marzo*, the neighborhood committee chairman pushed for and obtained funds to rebuild the health center.

The most pressing demand for services in both areas was in perinatal care. The maternity hospitals in both sites were overcrowded and important interventions such as TT vaccinations and immediate breastfeeding were not adequately addressed. Consequently CSRA obtained funding to build and equip birthing centers in each site. At the time of the final evaluation the outer structure of the building in District 8 (El Alto) was finished. In Montero construction was approximately 75% completed. These centers are an important component of CSRA's ability to sustain the project and expand services in a critical area.

v. Progress on sustainability plans

Health center staff was trained in all of the CS interventions and is equipped to continue providing services into the future. (Refer to Section B.3.c.iii. Health Facilities Strengthening.) No CSRA or health center staff will lose their job at the end of the USAID funded project; everyone will continue function as always. Consequently CSRA will continue to implement the clinical and community-based IMCI strategies and the CBIO strategy. Additionally the supervision and continuing education of health volunteers will continue uninterrupted.

4. Results: Family planning

This project does not have a family planning component in the DIP.

5. Results: TB

This project does not have a TB component in its DIP.

C. Project management

1. Planning

Planning was based on data generated by the HIS system. Using an MS Access database, CSRA staff produced standard monthly reports. The reports gave the status of sentinel CS indicators and identified the households that needed to be followed up. It also reported on distribution and use of IEC materials by staff and volunteers. The clinic staff and the community-based staff met monthly to review the data and make plans accordingly. The planning meetings were led by the project coordinators at each site.

The planning system using the computerized HIS system was evidence of the implementation of the CBIO strategy. The HIS system had records of every household in the catchment areas, enabling staff to provide comprehensive CS surveillance. The major limitation of the system was that continued influx of new residents meant that sometimes there was lag time before staff could catch up with new residents. And in El Alto, the population growth eventually over took the project's ability to reach every household.

This project made use of the HIS system for planning to a greater extent than almost any other project evaluated by the lead evaluator.

a. Inclusiveness of the planning process

An outstanding feature of this project was how staff used the HIS to generate reports for the neighborhood committees. In Montero, staff met with each committee on a monthly basis. The meetings were based on a review of a HIS report that was adapted to their level of involvement. In the final evaluation interviews with leaders of each of the Montero committees the community leaders referred to the value of these planning meetings. The planning meetings contributed to the high level of involvement of the committees in health care issues.

In El Alto CSRA intended to implement the same system of community participation in the planning process. The highly politicized environment however, and the constant rotation in the committees' membership, inhibited the development of good working relationships. CSRA had to scale back the meeting schedule to a quarterly basis, and even then committees would take health off the agenda. As indicated earlier in this report the District Eight (El Alto) neighborhood committees stated that a major problem was the low level of interest in health care issues.

Another audience that CSRA included in the planning process was the municipal health departments. On a quarterly basis CSRA leaders met with the health departments and MOH representatives to review HIS reports. These reports included the pertinent national indicators that were monitored by the MOH. These reporting meetings also served to review CSRA's performance in relation to its contract. Again, the HIS was invaluable because CSRA had data that gave evidence of the number of patients served and of its progress in meeting health status objectives.

b. Practicality of the DIP work plan

CSRA implemented the CBIO strategy and CS projects in rural areas prior to this grant. This experience provided a foundation for the DIP work plan. The one unanticipated factor that affected the plan was the annual growth of the urban population. As discussed in Section B.2.b.ii. (Factors Affecting Achievement of Project Outcomes), a consequence in El Alto was that there were only enough staff to implement the CBIO strategy in the catchment area of three health centers. Another unanticipated factor that was discussed in this section was the politicizing of the health volunteers in El Alto which resulted in most of them not carrying out their functions as health volunteers.

c. Gaps in the DIP

The health needs that were identified in the DIP reflected the needs that were addressed in the project, thus there were not gaps in the DIP.

2. Staff training

As a Bolivian NGO, CSRA took on the role of managing the health centers in the project's catchment area. In terms of training and supervision, CSRA integrated the clinical and community-based IMCI staff into one team. Personnel functioned as a team in each health center under the leadership of the project coordinators and the project director. Duties were implemented without regard for whether they were CS staff or clinic staff. The only distinction under the surface was whether a person's salary came from the CS budget or reimbursement from the municipalities. Over the last eighteen months CSRA shifted personnel to the municipalities' accounts so that when the USAID-funded project ended all staff were funded by the same budget, thus completely eroding the distinction between clinic and community-based health care staff.

a. Changes in knowledge and skills

In regards to child survival interventions, CBIO and community-based IMCI, all staff was trained in these areas at the beginning of their employment. At the time of the final evaluation it was clear that everyone was well versed in all interventions and strategies. Their knowledge and performance was assessed as part of the supervision plan, thus more objective assessments will be presented in that section later in this report.

b. Adequacy of training resources

Each project site had training rooms, more than sufficient training manuals, good stocks of IEC materials, and plenty of flip chart paper. The project coordinators, management staff, HIS staff and the project director had laptop computers, and each site had a LCD projector. Thus the project had adequate training resources.

c. Lessons learned about building capacity of the project staff

The most valuable lesson learned was the cross-training of the nurses in clinical and community IMCI. That way nurses were rotated between clinic work and community work. This was especially important because typically nurses who only work in the clinic do not have a full appreciation for the work in the community. Having all nurses work in both areas contributed to the high level of achievement in the critical areas of managing ARI diarrheal diseases.

3. Supervision of project staff

a. Adequacy of the supervisory system

One aspect of supervision system was based on the HIS. Field staff recorded their daily activities (homes visited, follow-up subjects, topic of IEC materials distributed and discussed, etc.) and these were entered into the HIS. The supervisors received reports from the HIS manager and monitored their performance. The reports also enabled the project leaders to monitor the distribution of IEC materials and assess if all the health communication topics were being addressed adequately. Additionally the supervisors accompanied the field staff on home visits to do on-the-job training and monitoring. Finally an intangible factor was the good team work among the staff at each site. The sense of working as a team provided motivation for the staff to fully perform their duties.

The second aspect of the supervision system was a staff development system created by CSRA called *acompañamiento*. It was a participatory system where the supervisor and supervisee collaboratively set performance standards, defined skills needed for the job, and set administrative requirements. Based on these performance expectations, the supervisor and employee meet quarterly to assess progress and to identify problems and opportunities for staff development. At the end of the year together they do an annual assessment called *evaluación de desempeño*.

Integrated with the supervision system was a continuous quality improvement initiative. Individuals or teams identified areas that needed improvement, set goals, made action plans and assessed the results. This system was first implemented in 2006 and is still in development. The site coordinators and management staff expressed support for the system and identified ways in which it helped them. They uniformly expressed that CSRA should continue to refine and implement the staff development system. They expressed that it created a positive attitude in the

employees about supervision because traditionally supervision systems are punitive. Staff regarded this system as one that truly supported staff development.

b. Institutionalization and sustainability of the supervisory system

Institutionalization of the supervision system was an integral part of the health center management system that CSRA implemented as part of its contract with the municipalities. As with all of the other management functions, the supervision system will continue to be implemented as CSRA continues the project under its health services contracts.

4. Human resources and staff management

a. Personnel policies and procedures in place

As an independent Bolivian NGO, CSRA had personnel policies and procedures in place that governed all staff in all of its projects, one of which is the CS project. Because the health center staff and CS field staff all work for the same organization, policies and procedures are applied uniformly among all staff. The lead evaluator considered the policies to be adequate and applied fairly at all levels.

b. Morale, cohesion and relationships

All the staff at both sites participated in the final evaluation, except the doctors and nurses who were needed to carry on clinical services. Two doctors from the El Alto team and two from Montero however, were freed up to participate fully on the evaluation team, as were the nurses who had dual clinical and community duties. Because of the participatory nature of the evaluation, the teams participated in all aspects, from planning, designing data gathering tools, data gathering and data analysis. Thus the lead evaluation had the opportunity to observe morale and cohesion for a week at each site, under intensive working conditions. At both sites the team members willingly worked extra hours, cooperated with each other and contributed with a positive and willing spirit.

c. Staff turn-over

In Montero there was no turn-over of doctors and administrative staff. Over the life of the project, eight of the original nine auxiliary nurses left the project. Four emigrated to Spain, one left to do church work full time, and the others left to continue their education. Among the health volunteers there has been approximately a 10% turn-over every year. All who left were replaced. The most common reason for leaving was that their families immigrated to another part of Bolivia.

It was noteworthy that six of the volunteers went to auxiliary nurses' training and are now working as nurses in the project.

In El Alto there also was no turn-over of doctors, administrative staff and project field staff. In one case the MOH sent the order for a nurse to be transferred outside of the areas, but the community leaders objected and were able to get the order reversed. The project director took a leave of absence in the last year of the project, but CSRA hired a very competent person to assume the director's responsibilities.

d. Staff transition

No staff will lose their jobs when the USAID funding is completed; all of them will continue performing the same functions after the CS grant end-date. CSRA is able to continue with all staff and programs with its government health services contracts.

5. Financial management

CSRA has a number of grants and contracts other than this CS project and has a fully staffed financial management department. There have not been any problems in the financial management of this project. No changes were made to the budget that was submitted with the DIP. Financial reports were submitted on time. CSRA and Curamericas Global met and surpassed their counterpart obligations. After the mid-term evaluation CSRA began a process of shifting salaries to the contracts with the municipalities so that by the end of the grant there would not be a dependence on USAID grant funds for continuing the project. This process was successful because as mentioned earlier no staff will lose their job after the end of the project.

6. Logistics

a. Adequacy and impact of logistics on implementation

This project did not include the distribution of supplies and materials with USAID funds, thus no material logistical systems were needed in the DIP. Because CSRA managed the health centers they did have a system for managing the purchase and distribution of medicines and medical supplies. CSRA used grant funds to create an electronic system for purchasing, inventorying and distribution to the health centers. This system created substantial efficiencies and cost savings. In personnel it saved CSRA at least three staff positions.

7. Information management

a. Effectiveness of the HIS system for measuring progress

The HIS was an integral component of the project. The foundation of the system was the household census that was done at the beginning of the project. Household data were entered into a MS Access database which facilitated data organization and reporting. Operationally there were three sources for data that were used by the HIS. One source was patients' clinic charts. After clinical encounters patients' charts were taken to the HIS office and the data relevant to clinical IMCI and community-based IMCI were entered into the database. A second source was home visit records. All the families in the catchment areas had home health charts where auxiliary nurses, field staff and the health volunteers recorded each encounter. These charts also went to the HIS office for entry into the database before being refilled. A third source of data was the daily activity sheets that everyone who did home visits and community work filled out.

An added component of the HIS was a color coded marking system on the home health charts. The charts for households that needed follow-up were color coded based on all of the risk factors that were addressed by the project. Thus at a glance staff could identify the cases that needed follow-up without having to wait for a computer report. Staff members who were assigned to do home visits on a particular day went into the chart room and quickly pull the charts of the homes that needed to be visited that day.

b. Procedure for collecting, reporting and using data

In Montero the HIS was used by the health volunteers and auxiliary nurses to identify women and children who needed to be followed up; by the project staff for their monthly planning meetings;

and by the community leaders in monthly meetings with CSRA staff. Each family's file was updated from patients' charts after a medical visit and from home visit reports from the auxiliary nurses and the volunteers. At the end of the month the HIS manager produced standardized reports for the CS team and for the community leaders.

In El Alto the HIS was implemented in the same way, with exception of the neighborhoods where the influx of immigrants overwhelmed the staff's ability to provide comprehensive follow-up. As described earlier, CSRA modified the HIS in these neighborhoods by tracking the households that were visited based on a systematic coverage of the households with health communications and distribution of IEC materials. The HIS was used to verify that all households had been visited and over time received health communications on all of the project's interventions.

c. Staff skills for maintaining HIS system

One of interesting aspects of using electronic systems in underserved and low income areas is that people with innate skills emerge from the wood work, so to speak. This project is certainly an example of this phenomenon. In Montero for example, the HIS manager is a young man who started out as a health volunteer. He showed a strong interest in computers. The CSRA staff picked up on this and gave him the opportunity to learn. He eventually grew into the position of the HIS manager. The same phenomenon was repeated in El Alto.

This project makes extensive use of the HIS and it requires a number of qualified staff to make the whole system work. Evidence of the qualified staff was that the system worked well.

d. Use of special assessments

CSRA implemented a continuous quality improvement system (CQI) in all of the health centers. CQI assessments were completed in maternal health, TB, clinical IMCI and the completeness of clinical records. All clinical staff members were expected to participate in at least one study during the course of the year. By the time of the final evaluation all of the Montero staff did so and 15 of 18 staff in El Alto did so.

CSRA used Basic's Health Facility Assessment tool to conduct an assessment of six of the health centers, three in Montero and three in El Alto. Thirteen doctors were involved and the team assessed the care of a sample of 60 children's charts (under 2 years of age). In the first assessment done in March 2007, the overall rating was that the centers complied with 57% of the standards of care. Both teams used the findings to make changes to procedures and protocols. A follow-up assessment will be done in March 2008.

Both sites conduct quarterly patient satisfaction and staff satisfaction surveys. Especially in patient satisfaction the level of satisfaction increased since the beginning of the project. In particular, the El Alto team conducted cultural sensitivity workshops to help the staff work cross-culturally with patients from the Aymara culture. (Section C.2. Staff Training presents data on this issue from the final evaluation.)

Throughout the project the staff used a barrier assessment technique to identify specific barriers to behavior change and modified their IEC materials and health communications accordingly.

e. Extent of strengthening MOH data collection systems

CSRA managed the health services in both project sites, consequently the only HIS used was the one the agency set up. The only interaction CSRA had with the MOH data system was the reports that were submitted on a quarterly basis. These were submitted on paper.

f. Partners' comprehension of the project's accomplishments

The fundamental procedure that CSRA used for informing their partners was conducting regular meetings in which they communicated the status of measurable indicators and engaged partners in planning for the next period of time. With the neighborhood committees they met monthly in Montero. Because of the difficult political climate in El Alto, CSRA met with the committees on a quarterly basis.

CSRA staff met with the municipal authorities quarterly to share data and plan. These meetings were an important factor in CSRA being perceived as a reliable and effective vendor for their health services. These meetings made CSRA transparent in their management of their contracted health services, which consequently created a sense of confidence in the organization.

g. Use of HIS beyond CS project

The way that CSRA used data for reporting, planning and patient monitoring made the HIS system an indispensable part of the project. The infrastructure was in place, staff was trained, and the systems for using data functioned in an efficient manner. The HIS system will be an integral component of the services that CSRA has to “sell” to the municipal and national government.

8. Technical and administrative support

a. Types of technical assistance received

CSRA received technical assistance in a wide range of subjects. These are described in more detail elsewhere in this report. The most prominent areas in which it received technical assistance was in BCC strategy and IEC materials development, staff supervision and development system, health facility assessment, and medicines and supply management system. CSRA leaders stated that they were satisfied with the assistance received. It was evident that CSRA implemented substantive changes in response to the technical assistance.

b. Headquarter support of the field project

Through Curamericas Global's leadership CSRA was founded as a Bolivian NGO. These two agencies worked in partnership to write the proposal. Curamericas Global administrative staff joined in participatory workshops for planning the DIP. Staff members made two to three trips a year to provide administrative support and technical assistance. Additionally Curamericas Global was responsible for the administrative and financial reporting to USAID. And as stated in the section on financial management, the headquarters contributed financial support that enabled this project to exceed its financial match.

9. Mission collaboration

The USAID/Bolivia grant manager was active in supporting the grant. He was always responsive to inquires and requests. He visited both sites and knew the project well. Staff members reported that he was always available for consultation and recommendations regarding technical assistance.

10. Management lessons learned

The principle management lessons learned were as follows.

- The CBIO strategy was developed in rural communities. In an urban context CSRA needed to take into consideration an unstable population. Migration into the project's catchment area, and movement within the area, meant that the population census had to be regularly updated. Also staffing and health services plans needed to anticipate a growth in population.
- Again in relation to urban areas, national politics is more likely to affect the social environment than in rural areas. This certainly was the case in El Alto.
- Supervision and staff development can be done in a positive and developmental way. The system of *acompañamiento* and the annual assessment called *evaluación de desempeño* contributed to the positive work environment.
- An up-front and intensive investment in a system for training and monitoring staff in IMCI paid off in the long run. At the beginning of projects staff members often feel the pressure to move quickly into implementation. The fact that CSRA took the time to implement a well-planned training system resulted in not only skilled staff, but staff members who were committed to the principles of IMCI.

D. Other issues

No other issues arose in the final evaluation of this project.

E. Conclusions and recommendations

1. Achievement of objectives and outcomes

This project achieved most of its objectives. Nineteen measurable objectives surpassed the goals and increased substantially from baseline. The most notable achievements were:

- Pregnant women with at least one prenatal visit (91.7%)
- Children with diarrhea who receive ORS and/or other liquids (89.8%)
- Children fully vaccinated (87.1% in Montero)
- Children with rapid breathing who received treatment (86.9%)
- Infants 6-9 months receiving breast milk and complementary foods (86.1%)

In six indicators there was progress but the goals were not met. In another six there was no progress. The El Alto site experienced lower levels of accomplishment in some indicators, primary due to political factors that were beyond its control.

2. Most important achievements and factors affecting project performance

Most noteworthy were achievement in mothers giving ORS in cases of diarrhea in children, care seeking for suspected pneumonia, and vaccinations (in Montero). Two major factors that affected accomplishment in these areas were the extensive staff training and community leaders training in IMCI and the well designed BCC strategy.

An outstanding feature of this project was how staff used the HIS to generate reports for the neighborhood committees. In Montero, staff met with each committee on a monthly basis. The meetings were based on a review of a HIS report that was adapted to their level of involvement. In the final evaluation interviews with leaders of each of the Montero committees, the community

leaders referred to the value of these planning meetings. The planning meetings contributed to the high level of involvement of the committees in health care issues.

The way that CSRA used data for reporting, planning and patient monitoring made the HIS system an indispensable part of the project. The infrastructure was in place, staff was trained, and the systems for using data functioned in an efficient manner. The HIS system will be an integral component of the services that CSRA has to “sell” to the municipal and national government.

No staff will lose their jobs when the USAID funding is completed; all of them will continue performing the same functions after the CS grant end-date. CSRA is able to continue with all staff and programs with its government health services contracts.

3. Outline of best practices and lessons learned

One best practice model in this project was the integration of the HIS, clinical IMCI and community IMCI. This project had an excellent system for identifying at-risk women and children, treating them in a timely manner and conducting follow-up and education at home.

Another best practice was the system for staff development, including engaging clinical staff in continuous quality improvement. The evaluation team found that 32 of 36 staff participated in at least one quality improvement project in 2007.

The vitamin A dosing rate in Montero was very high (97%). The health centers in Montero scheduled Monday’s as a MCH day and the staff took this opportunity to check on health promotion interventions such as vitamin A. The success of the MCH clinic day was a lesson learned for the project.

The CBIO strategy based on a census of every household and a system for regularly visiting at-risk households was the basis for effective system for following up cases of suspected pneumonia and diarrhea. This strategy contributed to the good outcomes in managing these illnesses.

4. Recommendations for USAID

The evaluation team does not have any recommendations for USAID.

5. Potential for sustainability

This project has excelled in creating a model for marketing its health services with an IMCI focus to the government health system. It will be sustained with no reduction in staff or services.

6. Headquarter application of best practices and lessons learned

A principle lesson learned for Curamericas Global was the need to adapt the CBIO strategy for urban areas. Another was the model for marketing health services to local government. In areas where government services are weak this is a model that can be cost effective for governments in other countries that have a decentralized health care system.

7. Potential for scale-up

For the immediate future CSRA plans to focus on consolidating its relationships and health services for the municipal governments. One area that will be scaled up will be maternity and newborn services with the new birthing centers in Montero and El Alto.

F. Results highlights

As identified in the DIP dehydration from diarrhea and pneumonia were the diseases that had the greatest effect on childhood mortality and morbidity. The project made substantial progress from baseline to the end in controlling these illnesses.

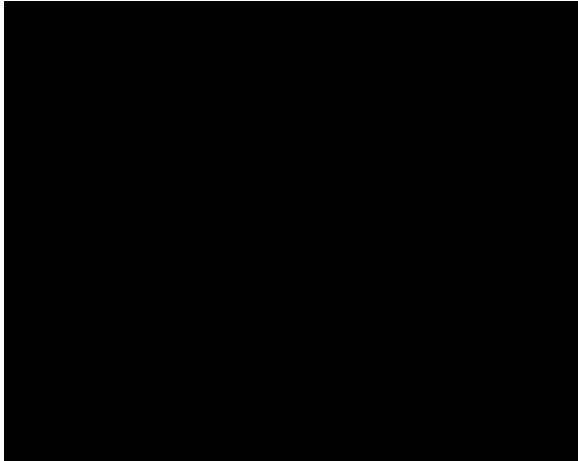
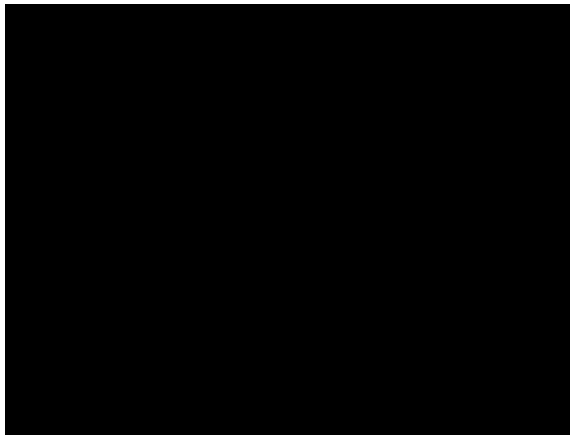


Chart 1 on the left shows that the number of children who were given home treatment in cases of diarrhea doubled and the final rate of 90% indicates that most children receive treatment. This also implies that mothers knew the signs and symptoms of diarrhea. Mortality data from all the health centers supported the value of this finding in that there were no reported deaths due to dehydration in the last 12 months.



The second important contrast between baseline and the end of the project was in care seeking in cases of suspected pneumonia. Chart 2 on left, presents the difference between baseline and final, which was a difference of 39 percentage points. As stated in the previous paragraph, there were no child deaths reported by the health centers, and certainly one factor was mothers' care seeking behavior.

A factor that influenced these outcomes was the health center staff's application of clinical IMCI and participation in quality improvement. The evaluation team found that all clinical and community staff members were trained in IMCI and were applying it, and nearly all participated in a CQI project in this calendar year. The fact that

almost all health center doctors and nurses in both sites did so is a strong indication of the effectiveness of CSRA's management of the health centers.

Another factor was the well designed IEC materials. Many of the measurable indicators were low at the mid-term evaluation, in part because of the poor quality of these materials. CSRA contracted with a local consultant and did a major up-grade. At the final evaluation the staff cited their IEC materials as one reason for the good final outcome of the project.

The staff also cited value of all team members having the same vision for health care as important in achieving good outcomes. CSRA made a major investment in training all staff in IMCI and the CBIO strategies, and in creating a staff development system. As a result, whether in the patient exam room or in a family's home, the staff all had the same focus. This system is now institutionalized and will continue after the grant.

ATTACHMENTS

A. Evaluation team members

a. Evaluation team members in Montero:

Names	Positions
Richard Crespo	Lead evaluator
Dr. Dardo Chavez	Director
Aux. Monina Coimbra	Auxiliary Nurse
Lic. Marina Tenorio	Area Coordinator
Dr. Angel Pinto	Doctor
Lic. Mitma Claire	Head of Regional Human Resources
Mirtha Sanjinez	Head of Regional Administration
Lic. Fémida Gutiérrez Zubieta	Regional Technical Head
Aux. Guadalupe Balcazar	Auxiliary Nurse
Aux. Sonia Chipana	Auxiliary Nurse
Lic. Silvia Ajhuacho	Area Coordinator
Dr. Monica Almanza Gutiérrez	Doctor
Aux. Noemi Labrayo	Auxiliary Nurse
Dr. Irma Condori	Project Coordinator
Raul Burgos	HIS Manager
Nancy Nix	Senior Program Specialist

b. Evaluation team members in El Alto:

No.	Names	Positions
1	Irma Condori	Director of District 8
2	William Valencia Nina	Technical Head
3	Ma. Eugenia Velasco Choquetarqui	Director of Senkata Health Center
4	Rolando Cruz Tarqui	Doctor
5	Alcira Aguilar Codori	Auxiliary Nurse
6	Mercedes Apaza Quispe	Auxiliary Nurse
7	Luciano Tintaya Callisaya	Supervisor of MBC
8	Uvaldo Quelali Mendoza	Supervisor of MBC
9	Gregoria Huanaco Condori	Head of IEC Field Team
10	Jhonny Pinto	Head of IEC Field Team
11	Vicente Luque	Head of IEC Field Team

B. Final KPC report

Executive Summary **KPC Survey, Curamericas and Consejo de Salud Rural Andino (CSRA)/** **Bolivia (El Alto and Montero)** **Prepared by Henry Perry**

I. BACKGROUND

This was the end-of-project household survey to measure the achievement of project indicators.

II. PROCESS AND PARTNERSHIP BUILDING

CSRA has built up quite a capacity for carrying out and analyzing surveys as a result of its long collaboration with USAID in child survival programming, which extends back to 1987, now 20 years! CSRA has a strong and close relationship with the Bolivian MOH and with the local people themselves for carrying out this work.

III. METHODS

A. Questionnaire

The questionnaire is the same as that used for the baseline in 2000 except for minor changes. One questionnaire is for mothers of infants 0-11 months of age and the other is for mothers of children 12-23 months of age. Copies can be found in Annex 3.

B. Sampling Design

LQAS was used, with 19 respondents in each sampling area (“lots”). Since this child survival project consists of 2 separate geographic areas, separate surveys were carried out in El Alto and in Montero. In El Alto, there were 9 sampling areas, and 171 respondents for each of the two questionnaires. Thus, 371 mothers of children 0-11 months of age were interviewed in El Alto, as were 371 mothers of children 12-23 months of age. In Montero, the same procedure was followed, yielding a total of 371 mothers interviewed as well.

In both project areas, all houses were numbered as part of the census-based, impact-oriented methodology. In each sampling area, 19 houses were selected at random.

C. Staff and Training

The KPC supervisors were all project staff members with special aptitude for supervision and data collection who underwent special training. The interviewers were auxiliaries in El Alto and health volunteers in Montero. All had participated previously in mini-KPC surveys and census-taking activities which the project had carried out previously. In El Alto there were 5 supervisors and 12 interviewers, and in Montero there were 5 supervisors and 10 interviewers. There was 1 supervisor for every 2 interviewers. There was a coordinator for the data collection in El Alto and one in Montero. Altogether, 40 people participated in the survey data collection.

D. Data Collection and Analysis

The data collection took place over a 4-day period, from August 14-17. An evaluation of the day’s work was carried out at the end of each day. After each interview, the supervisor reviewed the questionnaire for completeness, as did the survey coordinator later. No more than one mother was interviewed in a given household.

The survey was first analyzed by hand by the team that collected the information. At the same time, the data were entered into the computer under the supervision of the Health Information System in each of the two project sites.

IV. FINDINGS

Although there were in actuality 2 separate surveys carried out and analyzed separately (for El Alto and for Montero), we will report here the main findings for the two areas combined, comparing the measures of the indicators at baseline with the measures obtained at the final KPC survey.

A. Maternal and Newborn Care

The percentage of mothers of a child 0-23 months of age who obtained at least one prenatal care visit during the most recent pregnancy increased from 79.2% to 91.7%. Although no baseline data were collected, 76.9% of mothers at the end of the project had obtained at least 4 prenatal care visits. The percentage of mothers who received health education about one or more health themes (preparation for childbirth, breastfeeding, birth spacing, immunization, or danger signs of pregnancy) during their prenatal care visit increased from 62.1% to 93.6%.

The percentage of mothers of a child 0-23 months of age whose last delivery was attended by a trained health care provider increased from 67.5% to 79.8%. The percentage of mothers of a child 0-23 months of age who received vitamin A supplementation within 2 months of their most recent delivery increased from 21.4% to 50.1%.

The percentage of mothers of a child 0-23 months of age who know at least 2 danger signs during the postpartum period increased from 4.2% to 57.9%, and the percentage who know 2 warning signs among newborns increased from 7.2% to 68.4%.

B. Nutrition

There was moderate progress in immediate breastfeeding after birth. At the time of the baseline survey, 46.0% of mothers reported immediate breastfeeding compared to 61.4% at the end of the project. The percentage of children 0-5 months of age exclusively breastfeeding during the previous 24 hours showed no change: 71.3% at baseline and 70.9% at the end of the project. However, there was strong progress in complementary feeding. At baseline, 47.1% of children 6-9 months of age were given breastmilk and complementary food while at the end of the project this increased to 86.1%.

The percentage of children 0-23 months of age with moderate or severe malnutrition (≤ -2 sd below the mean of weight for age) showed no change: 8.8% at baseline and 7.5% at the end of the project. The percentage of children who received a vitamin A capsule in the previous 6 months increased modestly from 55.6% to 69.7%.

There was a decline in the percentage of children who had been sick in the previous 2 weeks who received more liquids and continued feeding during the illness, from 47.5% to 37.3%.

Among children 0-23 months of age, 61.3% were weighed during their first month of life. Among these same children, 68.4% had a growth chart at home. (These indicators were not measured in the baseline survey.)

C. Immunizations

The percentage of children with immunization cards in the home increased from 67.5% to 89.3%. The percentage of children 12-23 months of age with all of their immunizations complete by 12 months of age increased from 33.3% to 53.5%, and the percent with all immunizations on the day of the survey increased from 51.8% to 65.2%. The percentage of children 12-23 months of age with a measles immunization increased from 58.8% to 73.7%. The percentage of mothers of a child 0-23 months of age who received at

least 2 doses of tetanus toxoid (TT) immunization during their most recent pregnancy declined from 69.4% to 50.1%. At the end of the project, 24.2% of mothers 20-24 years of age had obtained 5 doses of TT immunization. This indicator was not measured at the time of the baseline survey.

D. Childhood Illnesses

There was marked increase in the knowledge among mothers of the warning signs of childhood illness. At baseline, only 29.1% of mothers could name 2 or more warning signs in their children for which they should seek care compared to 76.2% at the completion of the project.

The percentage of mothers with a child 0-23 months of age with diarrhea in the previous 2 weeks who gave ORS or other recommended home fluids increased from 42.7% at baseline to 89.8% at the completion of the project. The percentage with diarrhea who received the same amount of more liquids of any type increased from 60.8% to 78.2%. The percentage with diarrhea who received the same amount or more food increased from 45.4% to 72.0%. The percentage with diarrhea who received the same or more breastmilk decreased from 84.0% to 72.6%.

The percentage of children 0-23 months of age with cough and difficult/rapid respirations who were treated by a trained health work increased from 37.6% to 86.9%.

E. HIV/AIDS

The percentage of mothers of a child 0-23 months of age who know 2 ways to reduce the risk of transmission of HIV increased from 28.8% to 57.0%.

F. Birth spacing

The percentage of mothers of a child 0-23 months of age whose previous child was born 24 months or after the most recent child more than doubled, from 32.9% to 70.0%. The percentage of mothers with a child 12-23 months of age who know where they can obtain family planning supplies increased from 75.3% to 88.6%.

V. DISCUSSION

Maternal/newborn care and nutrition were the two major areas of focus in the project, with each receiving 25% of the project effort. These findings show that the project made strong progress in both areas. There was marked progress in maternal knowledge of danger signs during the post-partum period and among newborns and in the coverage of vitamin A supplementation for mothers during the post-partum period. Strong but less dramatic progress was made in expanding access to prenatal care, which achieved 92% coverage at the end of the project. Furthermore, by the end of the project three-quarters of mothers were obtaining 4 prenatal care visits.

Although there was no demonstrable improvement in the nutritional status of children (as measured by weight for age) or in the prevalence of exclusive breastfeeding among infant 0-5 months of age, there was a major increase in immediate breastfeeding after birth and in appropriate feeding of infants 6-9 months of age. The percentage of children receiving supplementary vitamin A during the previous 6 months also showed a moderate increase.

Control of diarrheal diseases received 20% of project effort. The use of ORS or other recommended home fluid for cases of diarrhea doubled and reached 90% at the end of the project. The nutritional management of children with diarrhea also improved, with a major increase in those who continued to receive food. Pneumonia case management also received 20% effort. Care seeking for children with signs of possible pneumonia more than doubled from 38% at baseline to 87% at the end of the project. The knowledge of warning signs about childhood illness for which mothers should seek health care showed a marked improvement during the project.

Immunizations received 10% of the project effort, and there were modest increases in childhood immunization coverage, while the coverage of maternal TT immunization actually declined. The final evaluation report provides an explanation for this.

Finally, the KPC survey demonstrates that there was a marked increase in the knowledge among mothers about the transmission of HIV/AIDS.

INFORME
ENCUESTAS CPC 2000
EVALUACION FINAL

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1. INTRODUCCION Y ANTECEDENTES

El Consejo de Salud Rural Andino, implementó el Proyecto "Provisión de Servicios de Supervivencia Infantil en Áreas Rurales y Periurbanas de Bolivia" desde el año 2002 al 2007, en sus dos regionales: una en el departamento de Santa Cruz y otra en el Departamento de La Paz.

En Santa Cruz, la regional se ubica en la ciudad de Montero con 3 áreas de salud:

- Área de salud Villa Cochabamba, ubicada en la zona Este.
- Área de salud Cruz Roja, ubicada en la zona Oeste.
- Área de salud CLEM, ubicada en la zona Noreste.

En La Paz, la regional está ubicada en el Distrito Municipal N° 8 de la ciudad de El Alto, en la zona sur de esta ciudad. Pertenece a la Cuarta Sección Municipal de la Provincia Murillo del departamento de La Paz.

Cuenta con tres áreas de salud que son:

- Área de salud Senkata, que consta de dos Centros de Salud: Senkata 79 y Unificada Potosí.
- Área de salud Atipiris, que consta de dos Centros de Salud: Atipiris y 23 de Marzo.
- Área de salud Mercedes.

Para efectos solo de la encuesta y el muestreo se han identificado tres áreas de supervisión en cada Regional, correspondientes a las áreas de salud mencionadas.

PROPOSITO DEL PROYECTO

El objetivo del proyecto fue el de reducir la morbi-mortalidad materna e infantil mejorando los servicios de Salud Materna - Infantil y fortaleciendo el trabajo comunitario organizado, implementando un sistema de Salud Integral con enfoque de Interculturalidad en barrios del Sector Sur de la ciudad de El Alto, concretamente en el Distrito Municipal 8.

2. METODOLOGIA

Así como se planteó en la Línea de Base (LB), el objetivo de la realización de las Encuestas CPC 2000 fue obtener información sobre conocimientos, prácticas de las madres en atención integral al menor de 2 años, durante el embarazo, parto, puerperio, anticoncepción y, así como la cobertura de los servicios de salud en las Áreas de supervisión de Senkata, Atipiris y Mercedes del Distrito Municipal 8, y Cruz Roja, Villa Cochabamba, y CLEM en Montero.

En una reunión de todo el equipo técnico, se planificó todo el proceso de encuesta final del proyecto. En esta reunión preliminar que duró 3 días (del 2 al 3 de Agosto 2007),

trabajaron los responsables técnicos de cada regional y personal técnico de la oficina central del CSRA en la ciudad de La Paz (*Ver Anexo 1: Plan de trabajo Final*).

Para la realización de la encuesta final del proyecto en ambas regionales, se procedió a considerar tres áreas de supervisión en base a los siguientes criterios:

- Peso poblacional, buscando equilibrio entre áreas.
- Existencia o proximidad de Establecimientos de salud.
- Distribución y extensión geográfica

Esta división de áreas supervisión estuvo apoyada por:

- Identificación de las zonas de intervención a través de planos actualizados de los Municipios respectivos.
- Obtención de datos poblacionales totales de dos fuentes: para el caso de El Alto, del INE y de listas de población según Urbanizaciones provenientes de Presidentes de Juntas Vecinales. Para el caso de Montero, la fuente fue de la última actualización censal realizada (*Ver anexos 2.1 y 2.2: Poblaciones Montero y El Alto*).
- Se identificó grupo objetivo poblacional que corresponden a madres no embarazadas con niños de 0 a 11 meses de edad y madres con niños de 12 a 23 meses.

DISEÑO DE INSTRUMENTOS – Formularios/Cuestionarios CPC 2000

Se trabajó con el mismo formulario de encuesta de CPC 2000 – USAID, utilizado para la línea de base, cuyo contenido incluye las preguntas “Rapid Catch”, dirigidas a madres para obtener información relacionada a Conocimientos y Prácticas y Coberturas en salud materna y atención al menor de 2 años. Para la formulación de las preguntas se definieron, mediante listado, los indicadores en salud a ser explorados mediante este estudio cuantitativo. Este listado de indicadores y sus características son mencionados en los siguientes párrafos de este informe.

El formulario encuesta fue revisado y corregido, en lo estrictamente necesario, con apoyo del personal técnico de oficina central del CSRA así como de las áreas geográficas involucradas en el proyecto, hasta la versión final.

Los formularios definidos, a igual que en la línea de base, fueron de dos tipos, el tipo 1, dirigido a madres con niños de 0 a 11 meses de edad y el tipo 2 dirigido a madres con niños de 12 a 23 meses (*ver Anexo 3: Formularios/Cuestionarios CPC 2000*).

La encuesta N° 1 contiene preguntas destinados a recolectar datos generales, cantidad de hijos menores de 5 años, control de crecimiento, Estado Nutricional, administración de Vitamina “A”, Lactancia materna, Enfermedades diarreicas agudas, Neumonía. En relación a Salud Materna recolecta información referente al embarazo, parto, puerperio, VIH/SIDA; finalmente agua y saneamiento de la vivienda.

La encuesta N° 2 contiene preguntas similares al anterior, con la diferencia de recoger además información sobre inmunizaciones y espaciamiento gestacional.

Validación de instrumentos para recolección de datos.

Para la obtención de una versión final, se sometió a ambos formularios a una prueba piloto de validación en un día de prueba de campo. Esta actividad fue realizada en barrios localizados fuera del área de intervención.

INDICADORES INCLUIDOS EN EL ESTUDIO

El listado final de los indicadores en salud incluidos en la encuesta se encuentran en el *Anexo 4: Listado de Indicadores-Plan de tabulación Encuesta Final CPC 2000*. Este listado incorpora una gran mayoría, sino, la totalidad de las preguntas clave Rapid Catch; los indicadores clave para proyectos de Supervivencia Infantil propuestos por USAID; los indicadores clave incluidos en la propuesta original del Proyecto CS 18, así como otros de interés y prioridad institucional, así como los resultados producto de la tabulación realizada de todos los formularios de la encuesta final.

DISEÑO DEL MARCO MUESTRAL

Se utilizó la Metodología LQAS (Lot Quality Assurance Sampling) que es un método de muestreo aleatorio que usa pequeños tamaños de muestra para determinar la situación inicial del Proyecto, medir la cobertura, identificar áreas prioritarias (importantes, débiles, etc.), identificar de manera precisa las debilidades dentro de un área de supervisión y entre áreas de supervisión.

Se identificaron bajo una lista todas las urbanizaciones de las 3 áreas de supervisión del Distrito Municipal 8 y de Montero con el número de población de cada una de ellas, se subdividió en tres sub-sectores.

A objeto de poder expresar la mayor parte de los resultados con valor estadístico y en porcentaje se establecieron en cada uno de estos sub-sectores el número de 19 sets. Asumiendo que cada set de entrevista esta conformado en realidad por 1 encuesta TIPO 1 y 1 encuesta tipo 2, el total de la muestra fue de 342 mujeres (171 mujeres con niños menores de 1 año y 171 mujeres con niños de 12 a 23 meses). El siguiente cuadro aclara de mejor modo lo anteriormente mencionado:

Regional El Alto-Distrito Municipal No. 8:

Área de Supervisión	Numero de encuestas TIPO 1	Numero de encuestas Tipo 2	NUMERO DE SETS
Senkata	19 + 19 + 19 = 57	19 + 19 + 19 = 57	57
Mercedes	19 + 19 + 19 = 57	19 + 19 + 19 = 57	57
Atipiris	19 + 19 + 19 = 57	19 + 19 + 19 = 57	57
TOTALES	171	171	171
TOTAL ENCUESTAS	342		

Regional Montero:

Área de Supervisión	Numero de encuestas TIPO 1	Numero de encuestas Tipo 2	NUMERO DE SETS
Montero	19 + 19 + 19 = 57	19 + 19 + 19 = 57	57
Villa Cochabamba	19 + 19 + 19 = 57	19 + 19 + 19 = 57	57
CLEM	19 + 19 + 19 = 57	19 + 19 + 19 = 57	57
TOTALES	171	171	171
TOTAL ENCUESTAS	342		

Para el establecimiento de puntos muestrales, siguiendo la Metodología LQAS, se emplearon las tablas de números aleatorios, previo establecimiento del intervalo muestral. De este modo se identificaron los puntos muestrales según urbanización de acuerdo a población.

CAPACITACION

SELECCIÓN Y CAPACITACION DE SUPERVISORES

Personal del CSRA con experiencia en la realización de encuestas CPC en otras áreas de intervención del CSRA, apoyó fuertemente este trabajo. Se identificó dentro del grupo capacitado para las encuestas personas que demostraron aptitudes para cumplir roles y funciones de supervisor.

Una vez identificado el grupo de Supervisores para la encuesta, estos participaron de un taller de Capacitación en Encuestas CPC 2000. Como se podrá apreciar en el Anexo 5: *Diseño Metodológico Capacitación de Supervisores*, el principal objetivo de esta actividad era el de proveer información clave sobre las características del Estudio de Encuestas CPC, socializar los formularios CPC 2000 de evaluación final del proyecto, revisar conceptos clave de la Metodología LQAS, definir roles y responsabilidad además de tareas, y finalmente organizar con el equipo las actividades inmediatas de campo.

SELECCIÓN Y CAPACITACION DE ENCUESTADORES

Al igual que en la Línea de Base, se eligieron encuestadores en base a los siguientes criterios:

- Personas con conocimientos básicos de salud.
- Con suficiencia en lecto-escritura.
- De preferencia con manejo del idioma aymará.
- Experiencia en la realización de encuestas.
- De preferencia sin residencia en la zona de encuesta.
- Disponibilidad de tiempo completo.

El equipo de encuestadores estuvo conformado, por voluntarios de salud (Montero) y auxiliares de enfermería (El Alto), quienes participaron de mini encuestas previas o en procesos de censo en las dos regionales y otro tipo de trabajo de campo.

Esta fase se inició con el diseño de un plan de capacitación que incluía la identificación de contenidos, establecimiento de tiempos en cronograma e identificación de facilitadores (*Anexo 6: Diseño Metodológico Capacitación de Encuestadores*).

El objetivo del Taller era lograr que los encuestadores conozcan y apliquen apropiadamente las encuestas finales CPC para una óptima recolección de información. La duración del taller fue de tres días para cada regional. La capacitación fue realizada en ambientes de las mismas regionales.

Siguiendo el programa establecido para el taller, se desarrollaron los contenidos; inicialmente se recogieron las expectativas de los participantes sobre el Taller, se realizó la introducción y objetivos de la encuesta, identificación de la población objetivo.

Se revisó en general el conjunto de preguntas, posteriormente los dos tipos de encuestas, identificando las diferencias existentes entre ambos formularios.

Básicamente se siguió la misma metodología aplicada en la Línea de Base, una vez familiarizados con los tipos de encuestas, se empezó con la encuesta dirigida a madres con niños de 0 a 11 meses de edad, se revisaron pregunta por pregunta, aclarando dudas y ampliando información. Se procedió hacer lo mismo con el formulario dirigido a madres con niños de 12 a 23 meses de edad.

En el taller, la metodología empleada fue de activa participativa, a través de técnicas de exposición, lluvia de ideas, sociodramas y trabajo en grupos. Estos últimos especialmente destinados a las practicas en le manejo de formularios.

Se contó con el apoyo tanto de material visual (Papelógrafos, Diapositivas en Data Show, fotocopias presentaciones, formularios, etc.).

El *Anexo 6*, muestra que los contenidos de capacitación incluían además de la revisión de los formularios CPC 2000, conceptos básicos de la Metodología LQAS; Guía de procedimientos para el correcto control del peso al niño; Normas para selección e identificación de informantes, Técnicas para entrevistas; Roles y funciones para los Supervisores y Encuestadores; Listas de chequeo o de verificación de calidad dirigida a los Encuestadores. En la última jornada de capacitación se incluyo la realización de una prueba piloto para validar una vez más los formularios pero también para proceder a una ultima selección de los encuestadores a ser incluidos en la recopilación de datos.

Como otro material de apoyo se emplearon copias de planos de las áreas de supervisión para identificar las urbanizaciones correspondientes a los puntos muestrales.

Respecto al número de participantes, estos fueron 10 encuestadores y 5 supervisores en Montero, y 12 encuestadores y 5 supervisores en El Alto.

TRABAJO DE CAMPO - RECOLECCION DE DATOS

La recolección de información estuvo a cargo de equipos conformados en ambas regionales consistentes en 2 coordinadores de encuesta, 10 supervisores, 22 encuestadores, 4 logistas y 2 conductores, haciendo un total de 40 personas. La relación en trabajo de campo fue de 1 supervisor por cada 2 encuestadores.

Para la aplicación de las encuestas se cronogramaron 4 días, asignándose una jornada por cada área de supervisión, y reservando un día adicional para el caso de necesitar completar algunas encuestas pendientes. Se inició en fecha 14 hasta el día 17 de Agosto 2007.

Al finalizar cada jornada se realizó una evaluación de las actividades con el objetivo de identificar dificultades y dudas surgidas en el transcurso de la recolección de información y poder plantear soluciones para las jornadas futuras.

SUPERVISIÓN DE LA ENCUESTA

Los Supervisores estuvieron acompañando de manera diaria a los encuestadores bajo su cargo, priorizando seguimiento y apoyo a quienes así lo requieran.

Posterior a cada supervisión, los supervisores realizaban una charla de retroalimentación de lo observado al Encuestador lo que a su vez permitió fortalecer las destrezas y habilidades individuales para las siguientes entrevistas.

A su vez cada supervisor tenía la tarea de revisar cada formulario de encuesta llenado por sus encuestadores, firmando en el mismo como constancia, estos formularios fueron nuevamente sometidos a revisión por parte de los coordinadores de encuesta.

Selección de viviendas

En el caso de El Alto, por la no disponibilidad de listas de familias de todo el Distrito Municipal No. 8, la selección de viviendas fue apoyada mediante el uso de los mapas y croquis actualizados de las urbanizaciones. Una vez ubicados en el centro de la urbanización objeto de la encuesta, se empleo la técnica del giro de la botella, que nos indico la dirección a seguir en la búsqueda de las madres de niños menores de 2 años a encuestar. En caso de que en la vivienda seleccionada no se encontrara una madre con hijo (a) objeto del formulario, se procedía a visitar la casa más próxima.

En el caso de Montero, se utilizaron las listas de familias disponibles para toda el área de intervención del Proyecto.

Selección de informantes:

En ambas regionales, cuando en la casa a encuestar se hallaban 2 mujeres con las mismas características se procedían a seleccionar aleatoriamente a la persona a entrevistar, utilizando dos bolitas que tenían diferentes colores, que a su vez representaba a cada una de las candidatas a entrevistar. Se tomó en cuenta la regla

general, que indicaba no entrevistar a más de una persona (madre) en cada vivienda visitada.

D. PROCESAMIENTO Y ANALISIS DE DATOS

Al igual que en la línea de base del proyecto, el procesamiento de la información recogida a través de la encuesta empleo dos tipos de tabulación. Inmediatamente culminado el trabajo de campo se organizo una jornada de Tabulación Manual. Simultáneamente se procedió al Tabulado Computarizado con el objeto de poder luego cruzar los resultados obtenidos por ambos.

TABULACION.

Esta actividad se desarrollo de manera casi simultánea al levantamiento de datos. Esta actividad contó con el apoyo del responsable del SIS, 3 tabuladores y en ella se empleó el gestor de Bases de Datos MS SQL Server 2005 Express Edition. Esta tabulación se realizó bajo la estricta supervisión de los responsables del Sistema de información del CSRA para cada Regional. Una vez que estos resultados estuvieron disponibles, se realizaron controles cruzados con información de los mismos formularios tomados al azar, depurándose la información en relación las diferencias encontradas a objeto de contar con resultados finales confiables.

3. RESULTADOS DE LA ENCUESTA FINAL Y ANALISIS DE DATOS

De las 342 encuestas programadas para cada regional, en ambas se logró este número, haciendo un total de 684 encuestas (*Ver anexo 7: Tabla de resultados final y Anexo 8: Tabla Resultados Vida del Proyecto*)

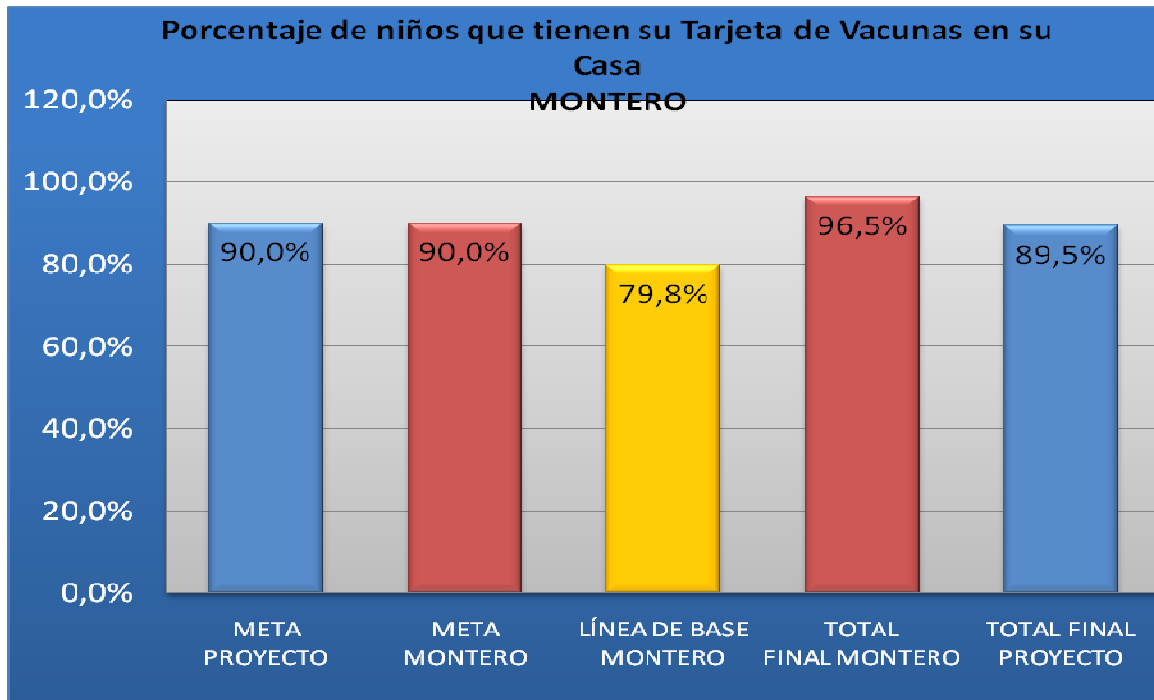
A continuación se detallan los resultados más sobresalientes alcanzados en este estudio, según indicadores y sus resultados incluidos en dichos formularios.

CONTROL DE CRECIMIENTO

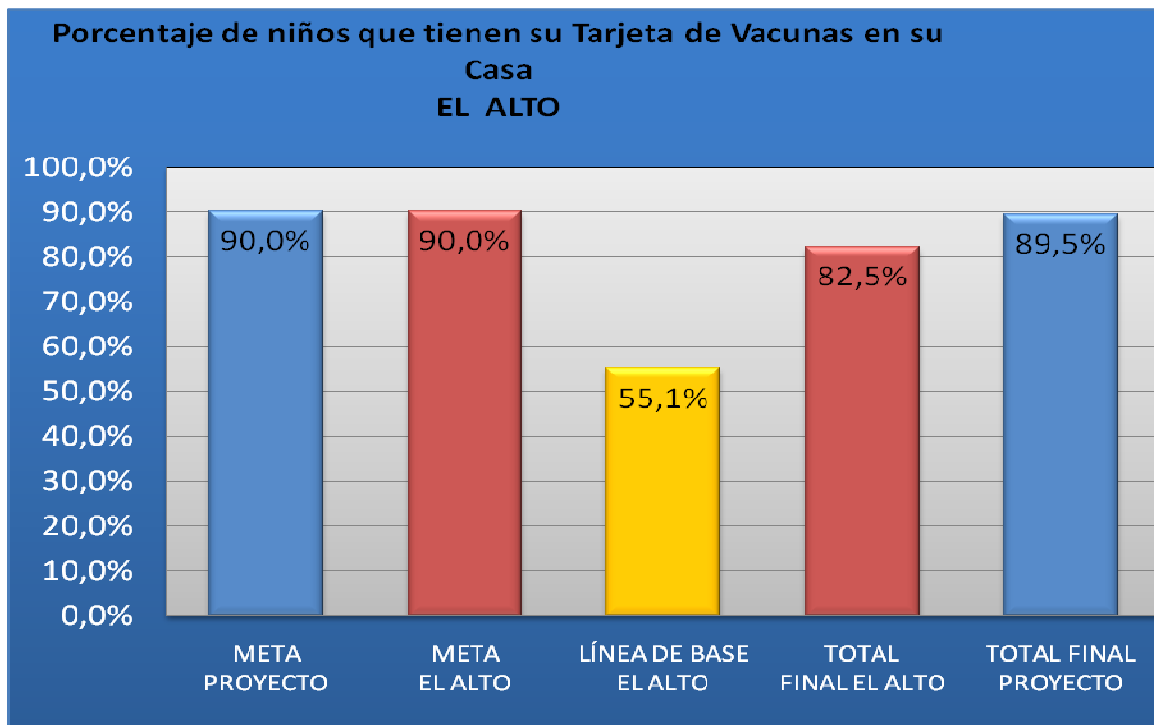
Tenencia de C.S.I. en domicilio

En general, como proyecto se logró un incremento a 89.3 % (612), de 67.5 % en la LB.

Montero: De las 342 encuestas realizadas a madres, el 96.5%(330) mostraron el CSI. Es decir que hubo una mejoría importante con relación a la LB (79.8 %). Se superó la meta de la Regional de 90%.



El Alto: En El Alto, el 82.5 % (282 de un total de 342) de las madres encuestadas, tenían el CSI de su niño/a en su domicilio. Se ve también un incremento importante en relación a la LB (55.1%), como se muestra en el siguiente cuadro:



Control de peso durante el primer mes de vida en niños menores de 2 años.

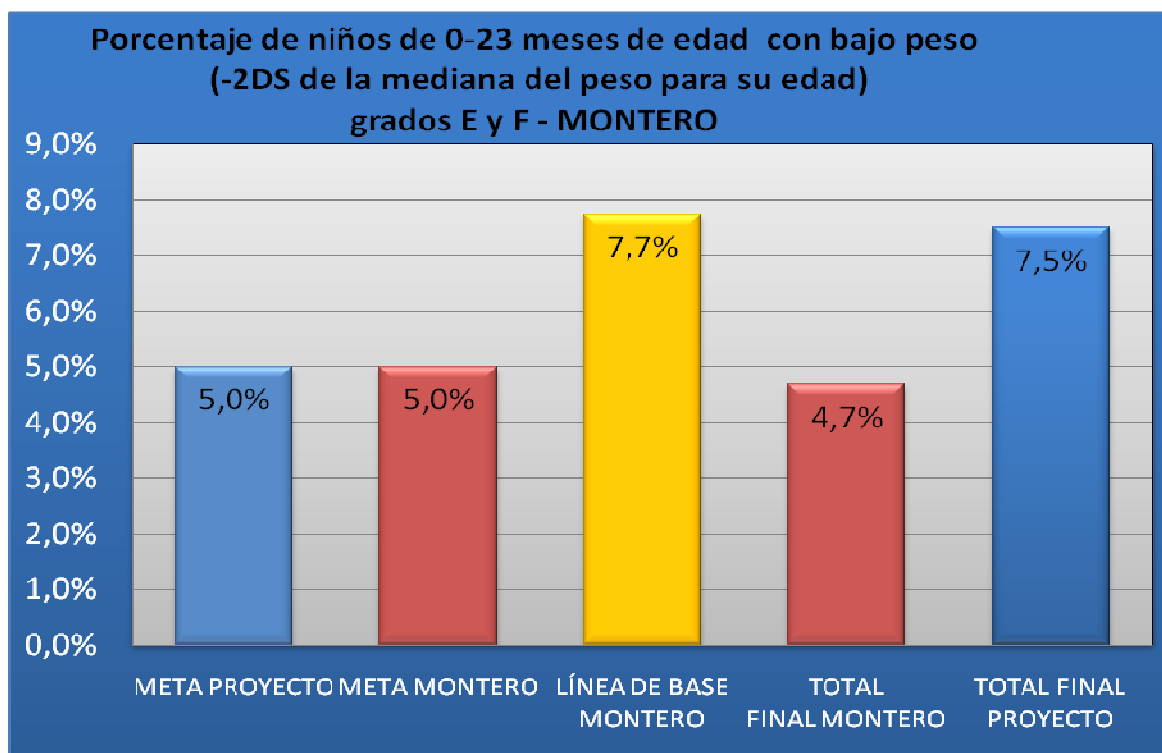
En Montero, de 342 encuestas (niños con y sin CSI en sus domicilios), el 67% de niños tuvieron su control en el primer mes de vida. Ahora en los niños con CSI en su domicilio el porcentaje fue de 69.4%. En El Alto, de 342 encuestas (niños con y sin CSI en sus domicilios), el 55.6% de niños tuvieron su control en el primer mes de vida. Ahora en los niños con CSI en su domicilio el porcentaje fue de 67.4%.

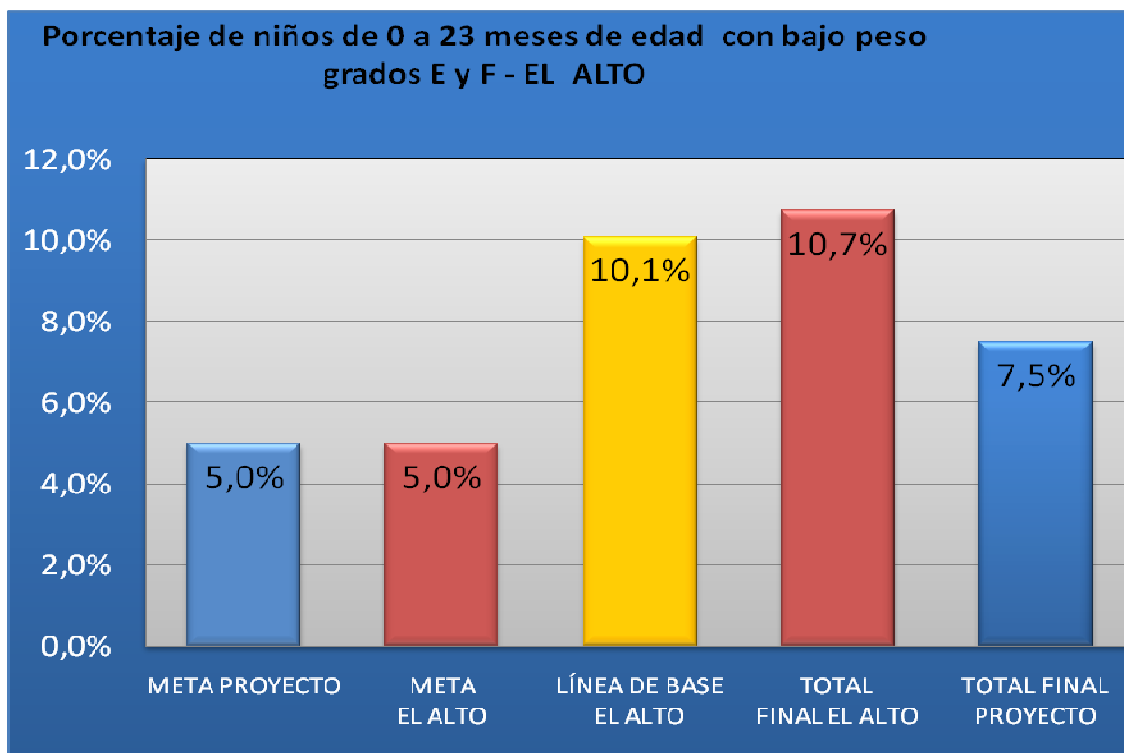
Como proyecto se logró un 67%, superando la LB.

Niños con bajo peso.

Montero: Del total de 342 niños pesados, solamente 16 (4.7 %) presentaron bajo peso, mejorando la LB de 7.7 % (25 niños). En El Alto, 32 (10.7 %) de 298 niños/as pesados presentaron bajo peso (grados nutricionales E y F). Solamente en Montero se logró alcanzar la meta del proyecto de 5 %, siendo el resultado como proyecto de 7.5 %, menor en relación a la LB de 8.8 %.

A continuación los resultados graficados:



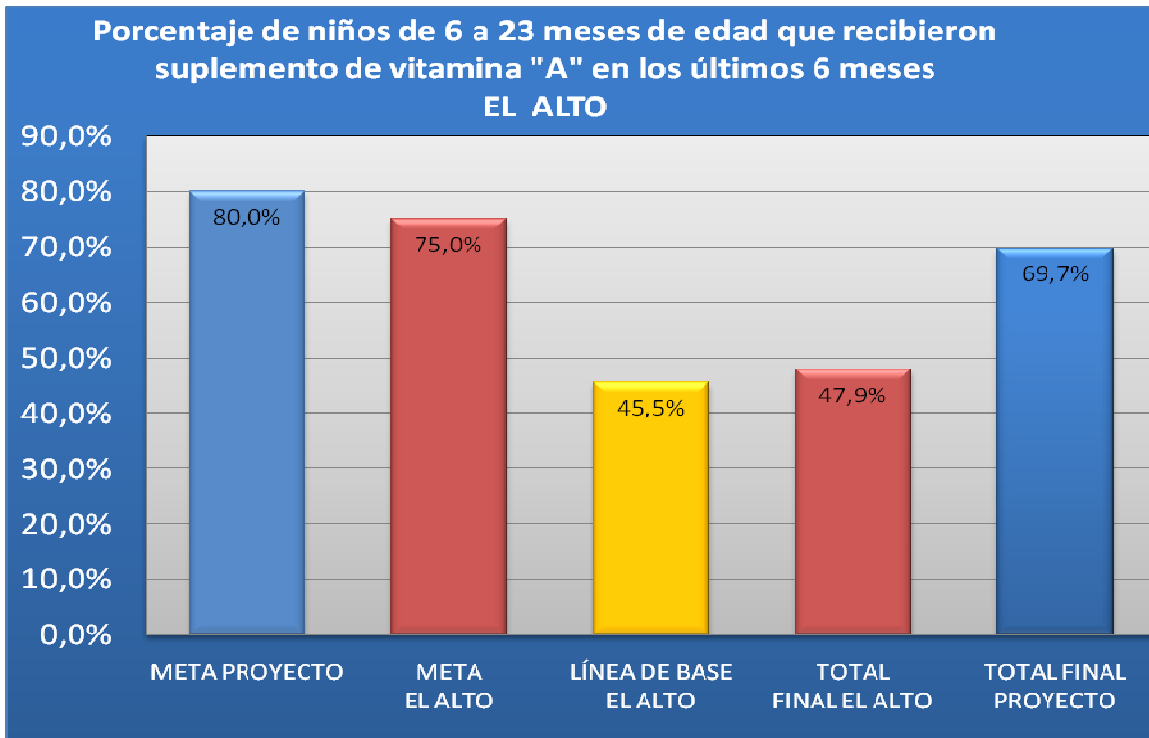
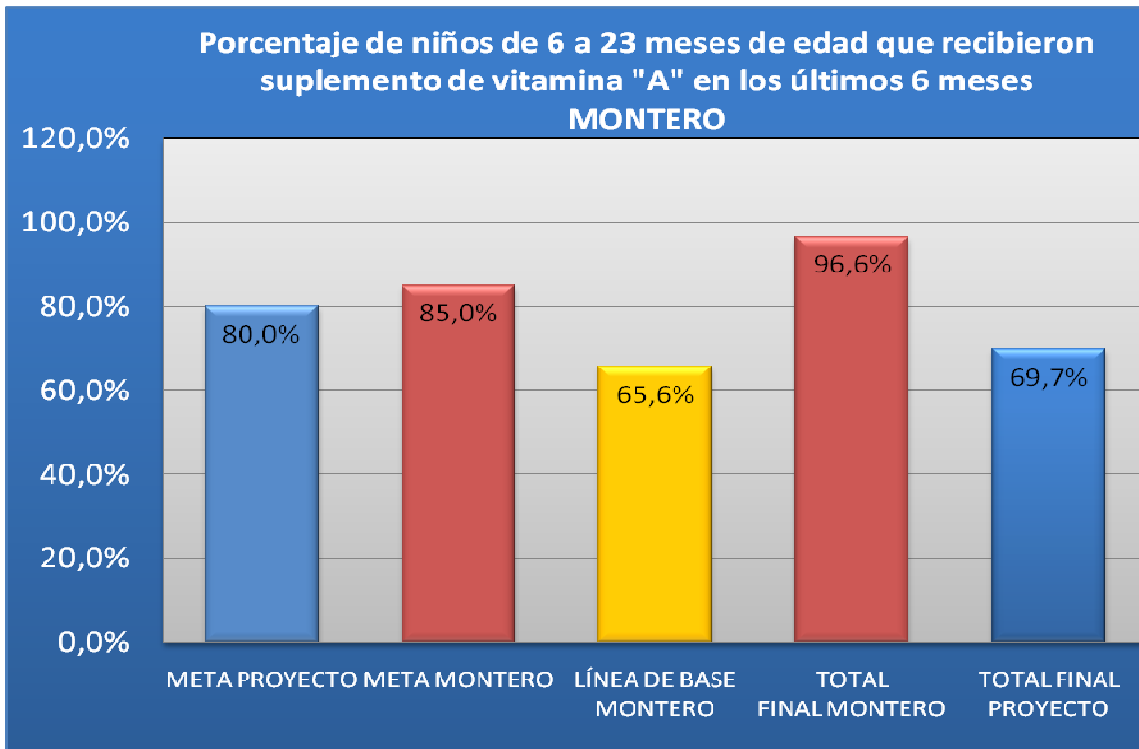


VITAMINA A

Niños que recibieron vitamina "A" en los últimos 6 meses

Montero: De los 265 niños entre 6 y 23 meses cuyas madres fueron entrevistadas, el 96.6 % (256) habían recibido una cápsula de vitamina "A". En El Alto, de 326 niños entre 6 y 23 meses, el 47.9% (156) habían recibido una cápsula de vitamina "A". Se observa un incremento en Montero con relación a la LB (65.6 %) y no así en El Alto cuya LB dio un 45.5 %.

En general, en el Proyecto este indicador se incrementó con relación a la LB de 55.6% (287) a 69.7 % (412). La meta del proyecto de 80 %, no se alcanzó.

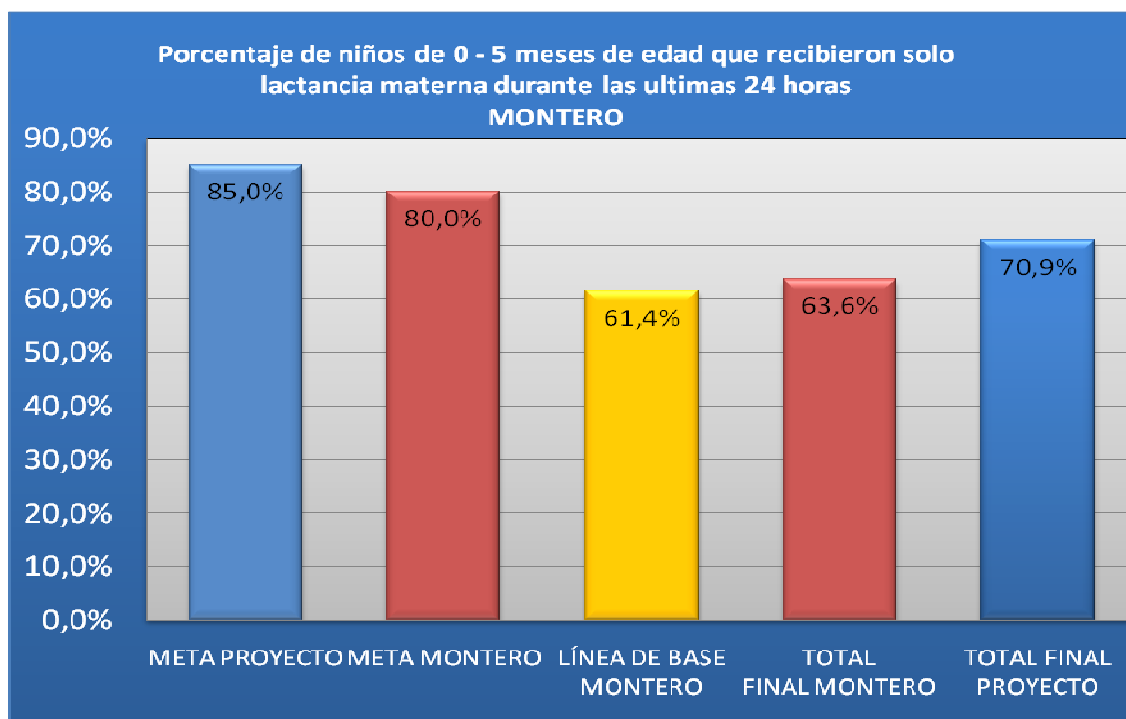


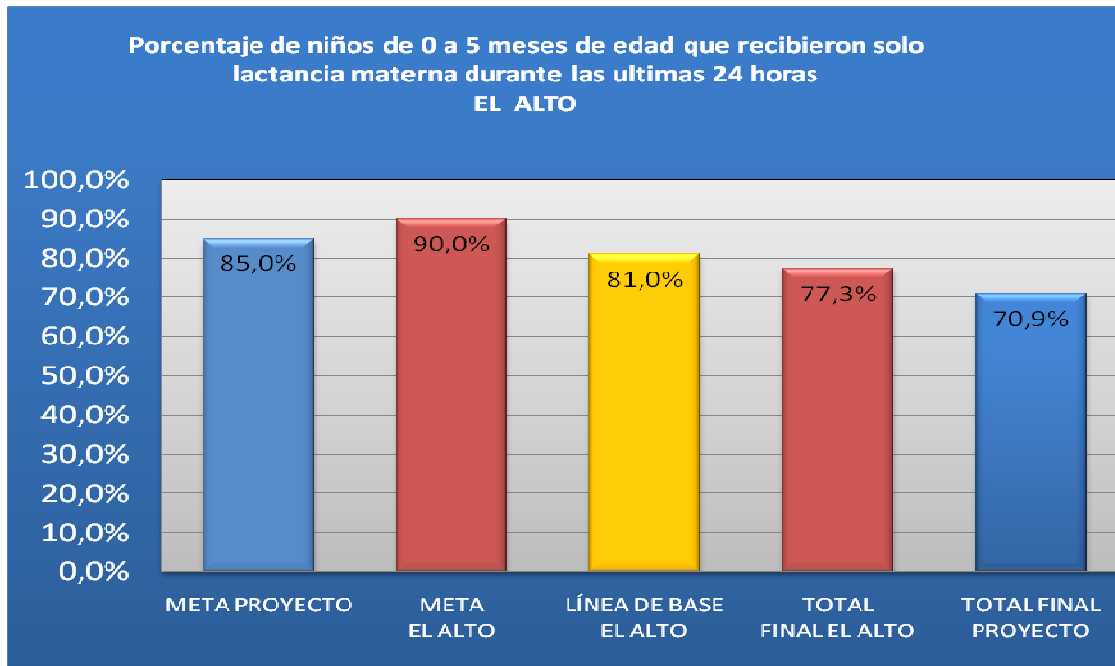
LACTANCIA MATERNA

Niños menores de 6 meses que recibieron lactancia materna exclusiva durante las últimas 24 horas:

Montero: De 77 madres con niños menores de 6 meses entrevistadas un 63.6 % (49) dieron de lactar en forma exclusiva a sus hijos menores de 6 meses. En El Alto, de 88 madres, 77.3 % (68) madres practicaban lactancia materna exclusiva.

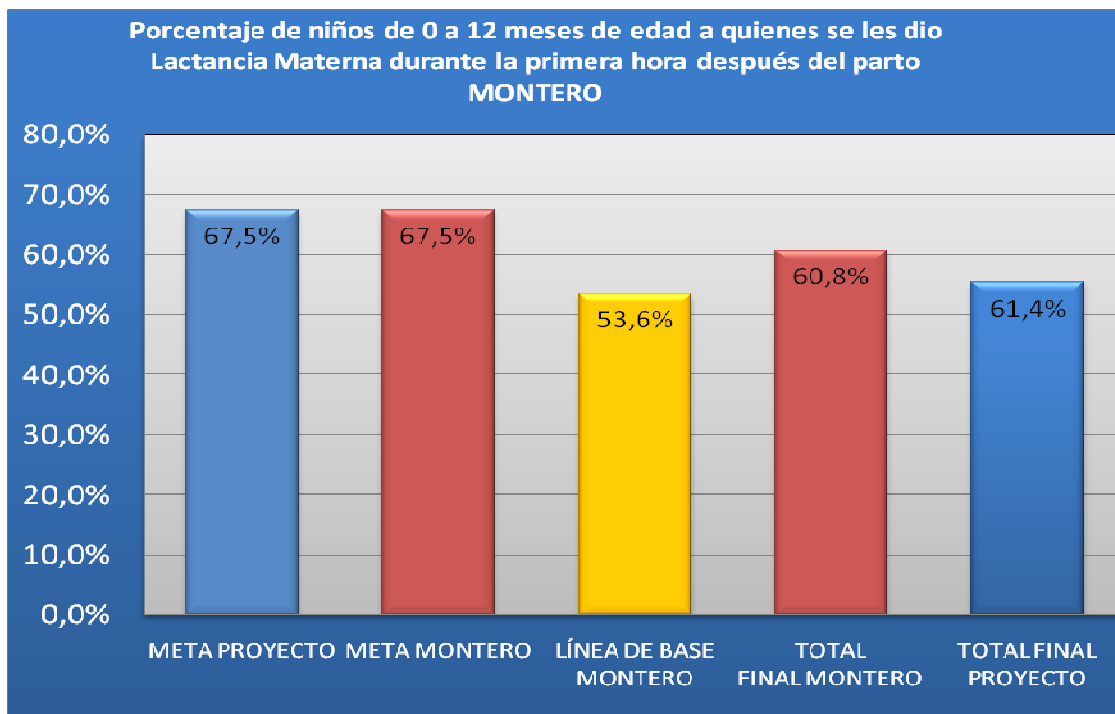
Solamente en Montero se logró incrementar el porcentaje con relación a la LB. El resultado como proyecto fue de 70.9 %, sin lograrse alcanzar la meta de 85 %.





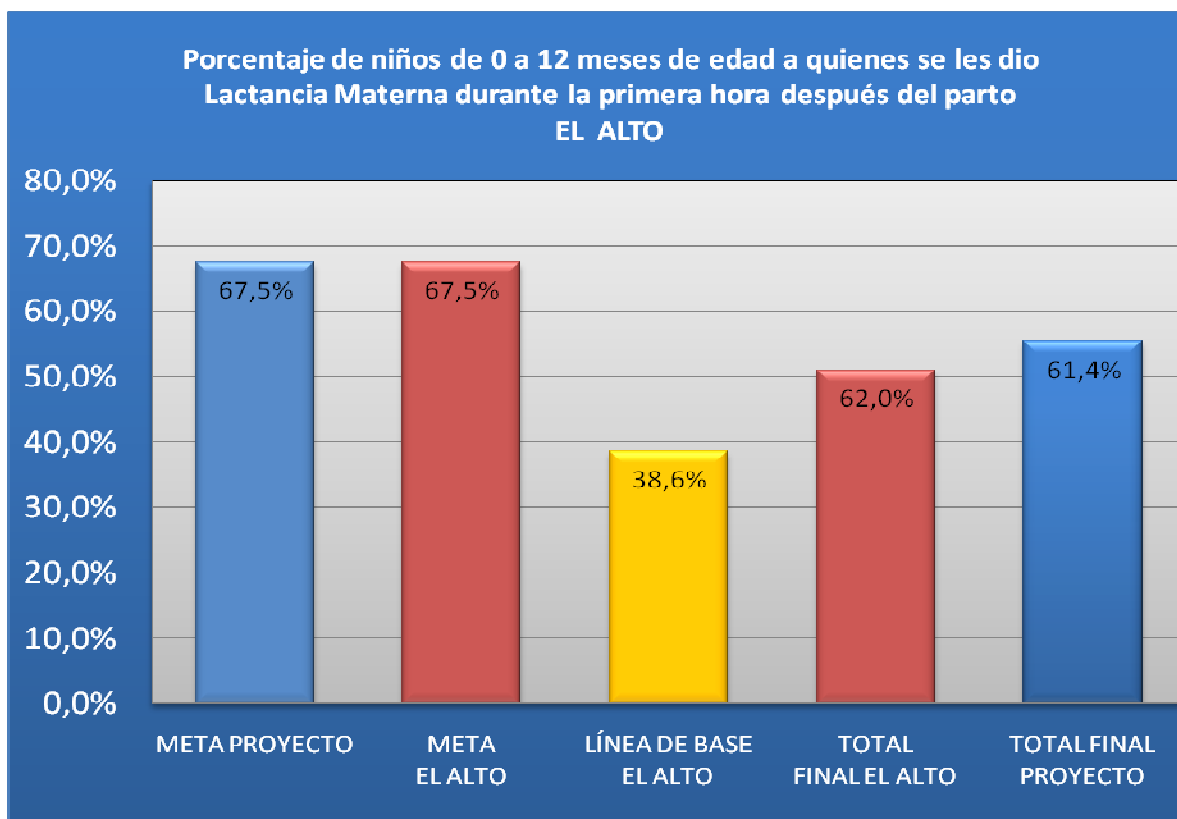
Lactancia materna durante la primera hora después del parto:

Montero: De un total de 171 madres, 60,8% (104) dieron lactancia materna durante la primera hora después del parto. Este indicador se incrementó en relación a la LB que fue de 53,6%.



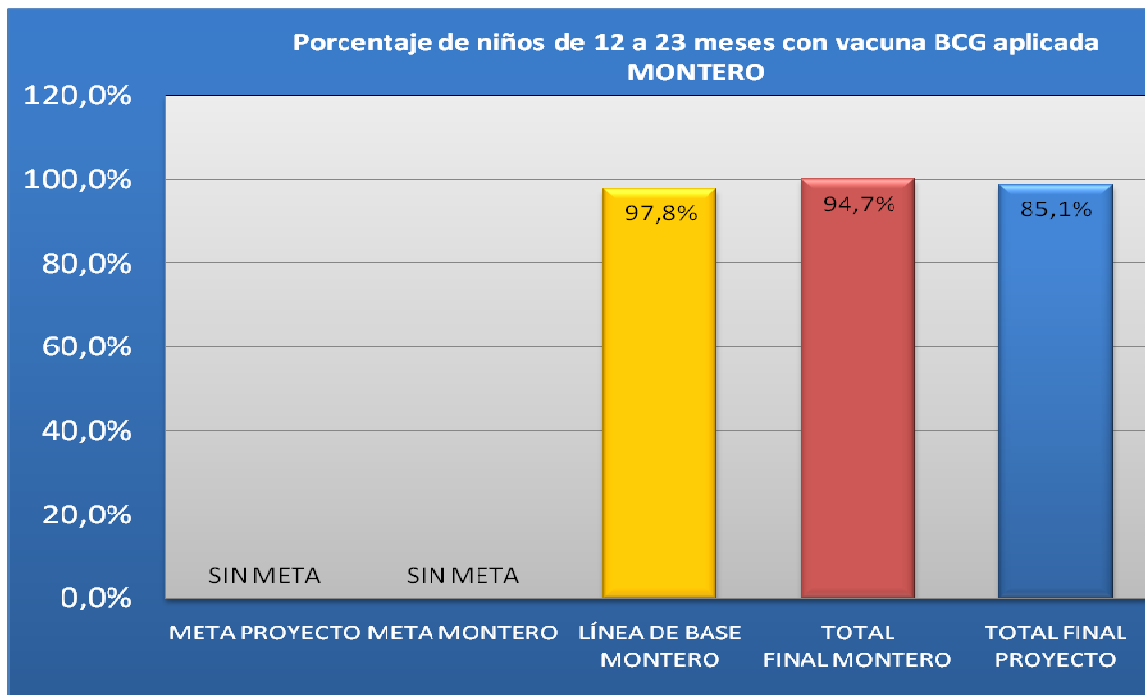
En El Alto, de un total de 171 madres, el 62% (106) dieron lactancia materna en la primera hora después del parto. Este indicador también se incrementó con relación a la LB de 38.6%.

Como proyecto, se incremento con relación a la LB de 46% (156) a 61.4% (210).

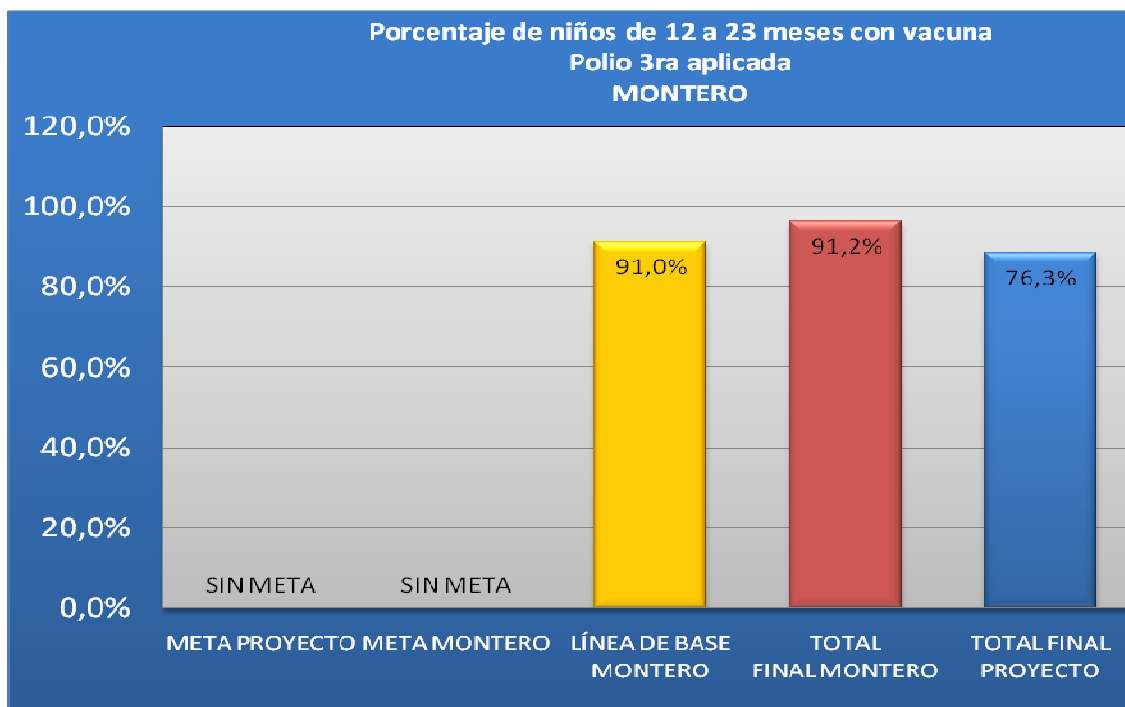


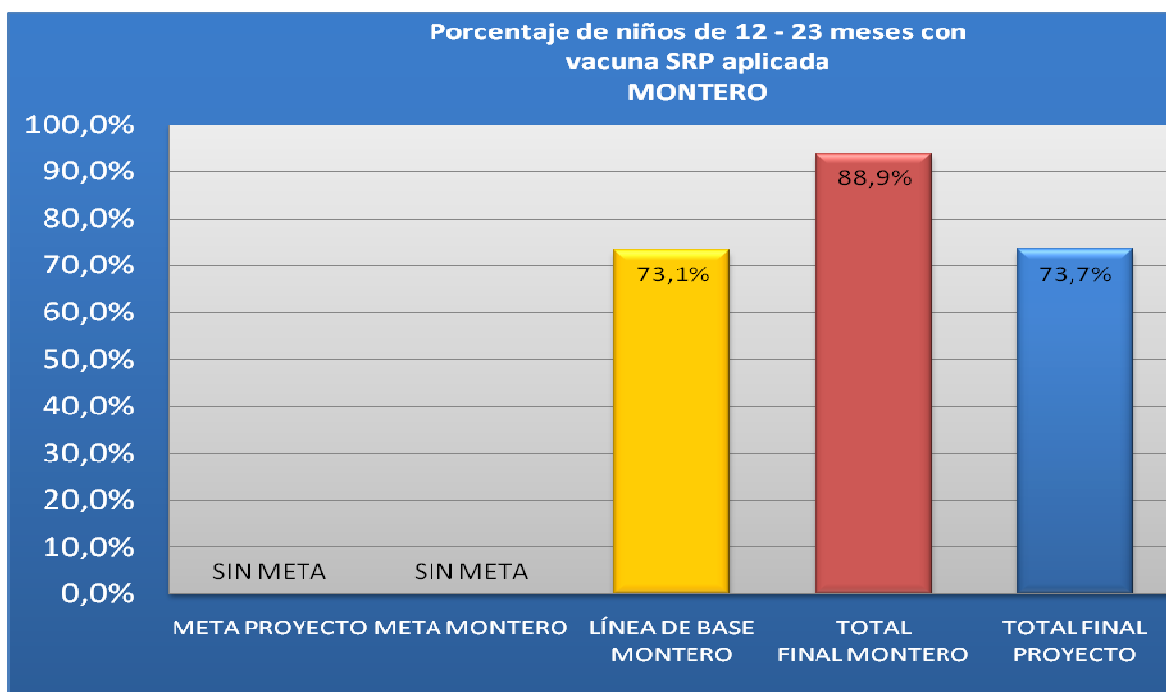
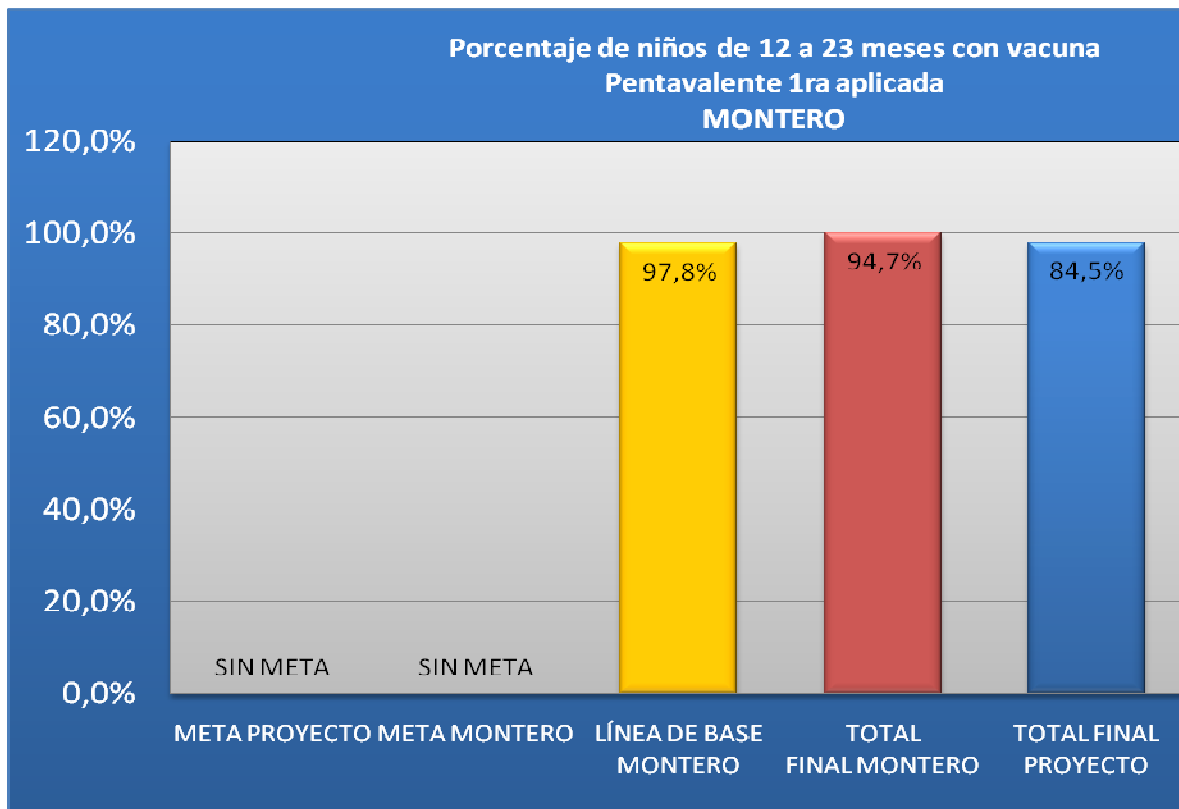
INMUNIZACIONES

Montero: en relación a inmunización con BCG en niños de 12 a 23 meses, de un total de 162 madres que mostraron el CSI de su hijo, el 100% fueron vacunados. Sin embargo, si se calcula con el total de niños de 12 a 23 meses de edad (incluidos aquellos que no disponen de CSI) el porcentaje de inmunización con BCG es de 94.7%. Manteniéndose el resultado de LB.



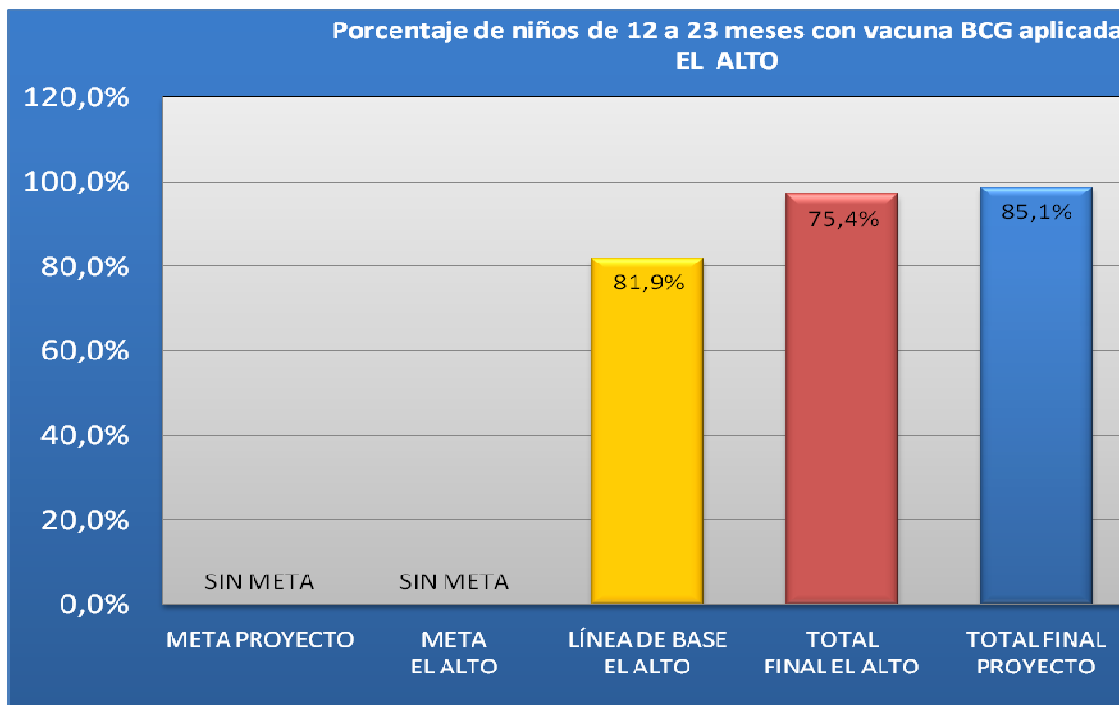
Calculando con el total de la muestra de niños de 12 a 23 meses los porcentajes son los siguientes: en antipolio 3ra dosis se tiene un 91.2%, en DPT 1ra dosis con 94.7% y con Vacuna Antisarampionosa el 88.9%. En general, los porcentajes se mantienen con relación a la LB, con un incremento para la vacuna antisarampionosa que en la LB fue de 73.1%.



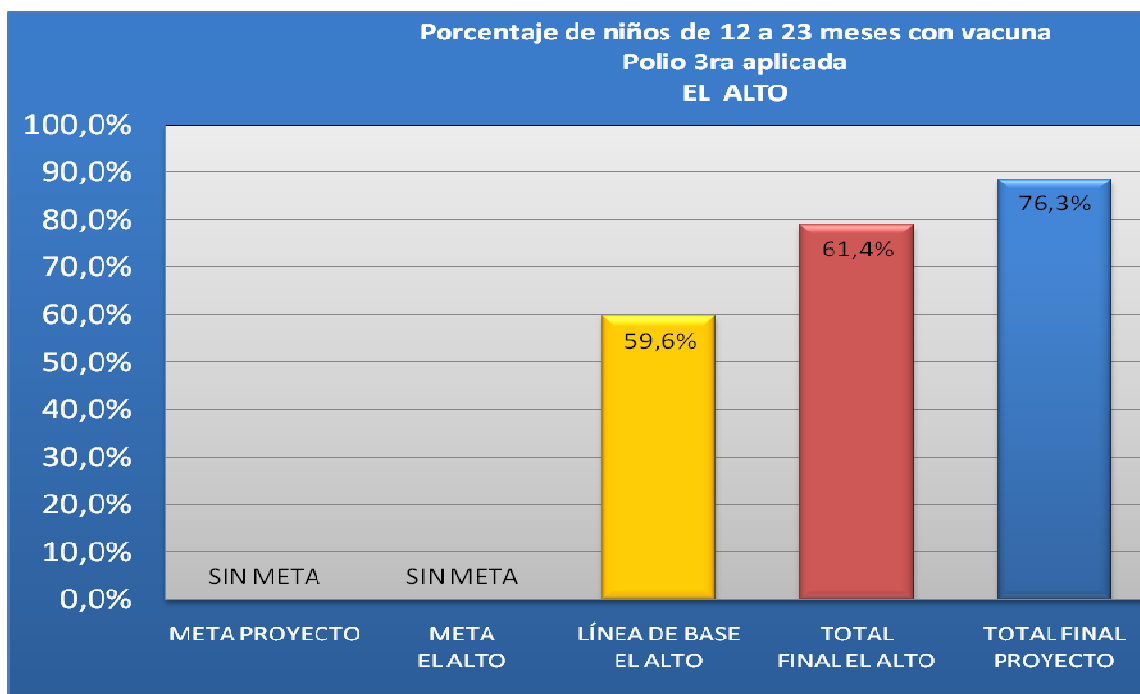


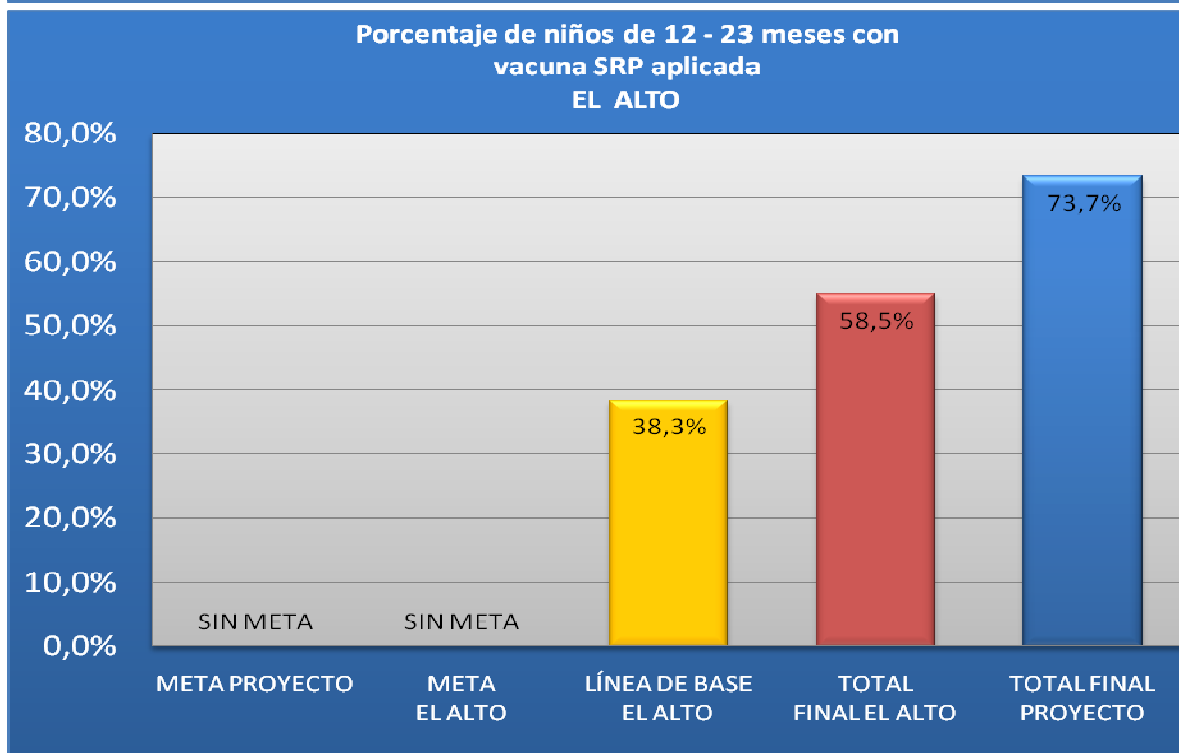
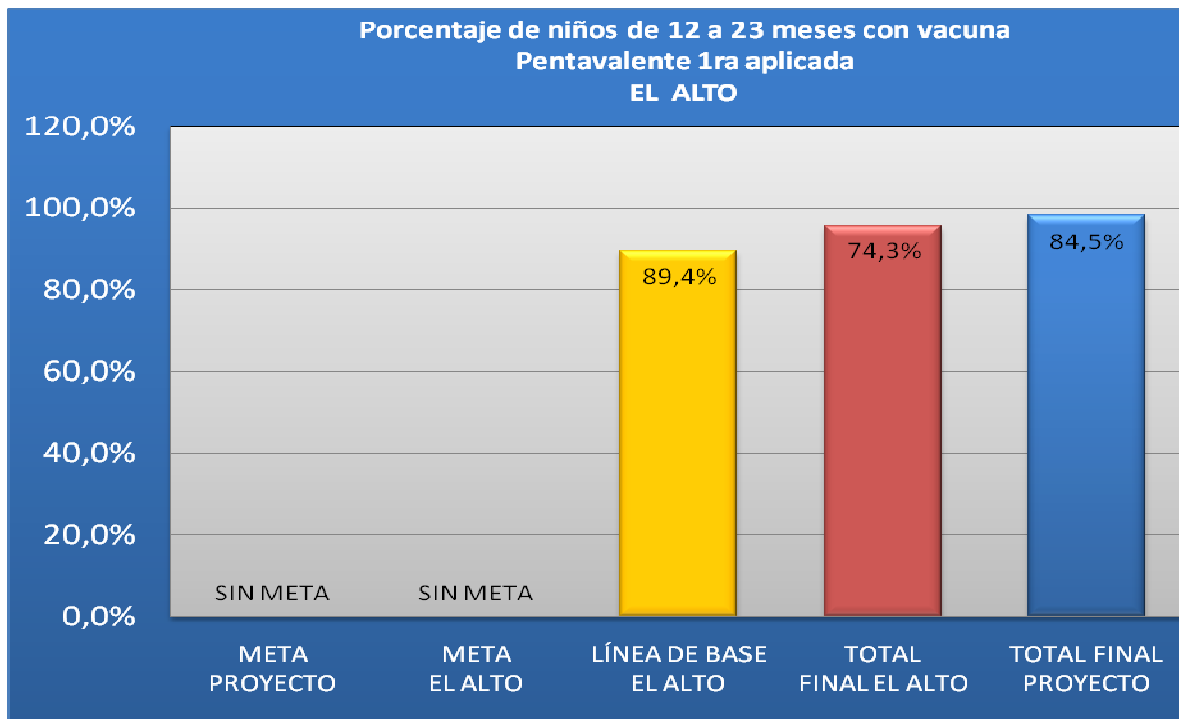
En El Alto: con respecto a inmunización con BCG en niños de 12 a 23 meses, de un total de 133 madres que mostraron el CSI de su hijo, el 97% fueron vacunados. Ahora, calculando con el total de niños de 12 a 23 meses de edad (incluidos aquellos que no

disponen de CSI) el porcentaje de inmunización con BCG es de 75.4%, inferior a la LB de 81.9% (77 de un total de 94).



Haciendo el cálculo con el total de la muestra de niños de 12 a 23 meses los porcentajes son los siguientes: en antipolio 3ra dosis se tiene un 61.4%, en DPT 1ra dosis con 74.3% y con Vacuna Antisarampionosa el 58.5%. En general, los porcentajes se incrementaron con relación a la LB, excepto para la vacuna DPT (89.4%).

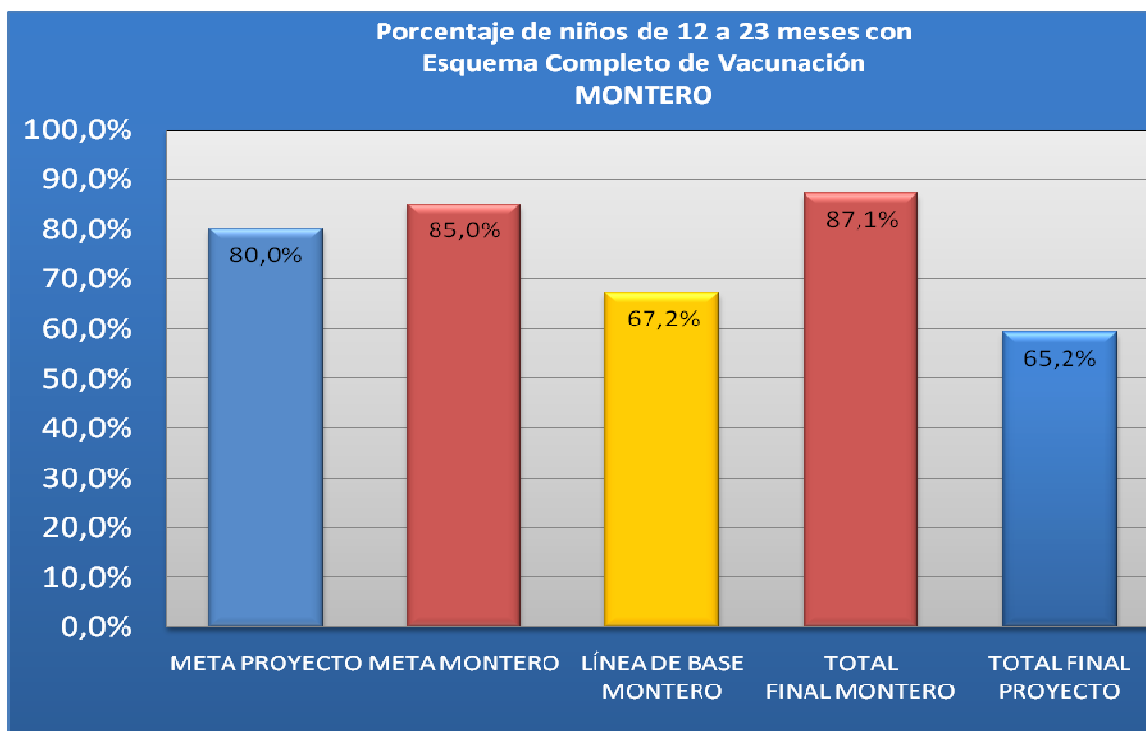
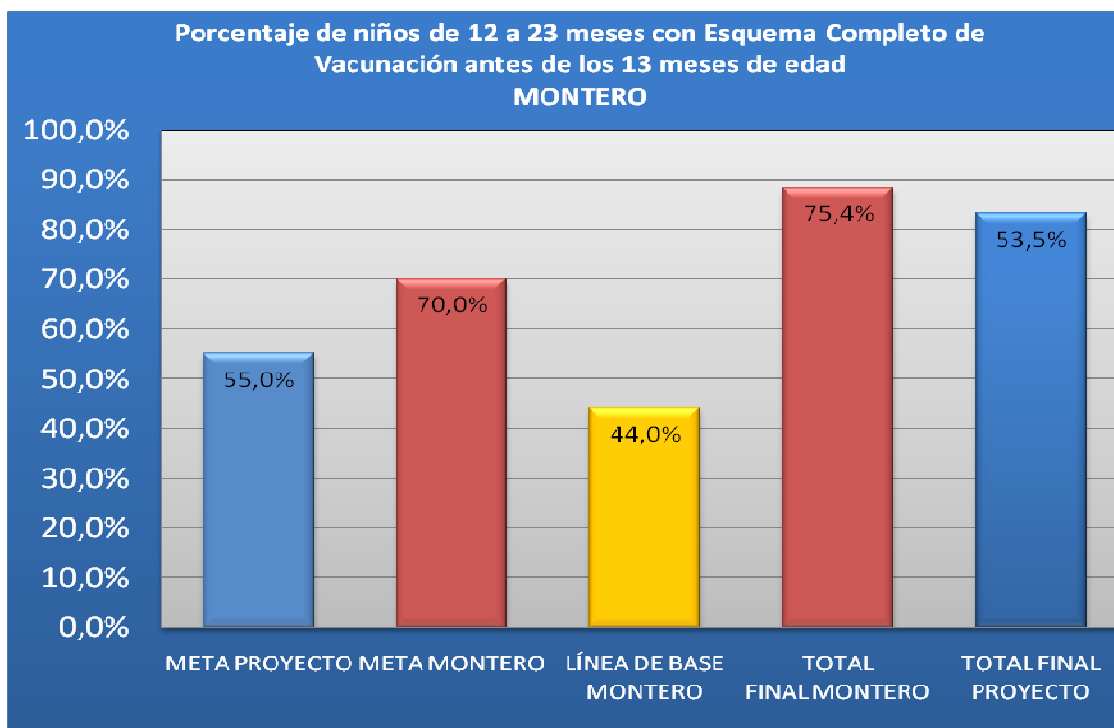




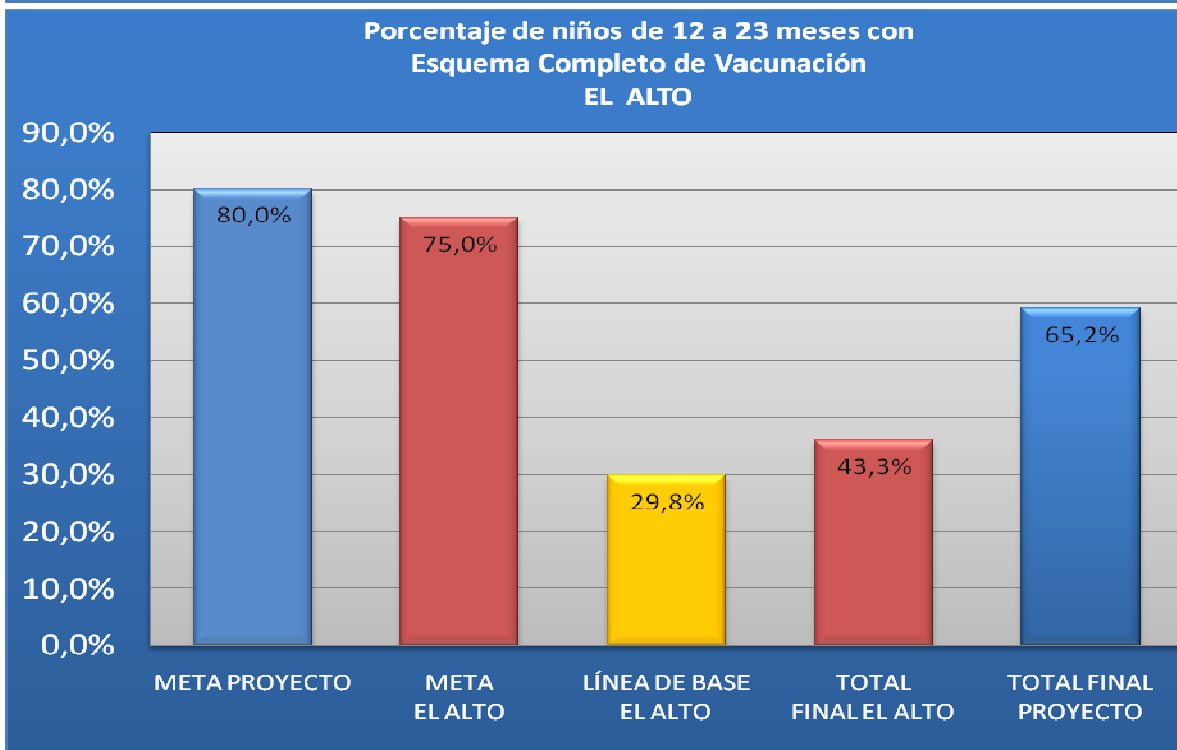
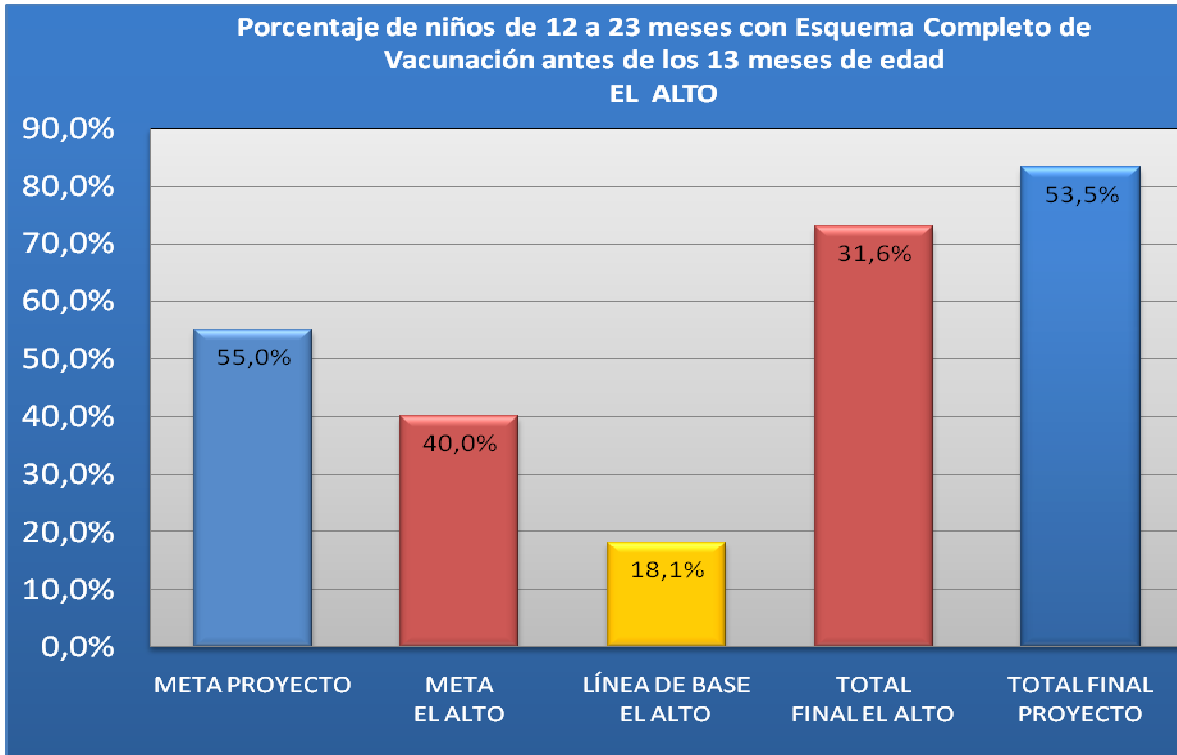
Como proyecto, considerando al total de niños con CSI, el porcentaje de niños de 12 a 23 meses con vacuna BCG alcanzó a 98.6%, mayor a la LB (91.2%). Con respecto a la vacuna antipolio 3ra. Dosis, el resultado fue de 88.5%, superior al de la LB (78.1%). En DPT 1ra dosis, se logró un 98%. Sin embargo realizando el cálculo incluyendo en el denominador a niños con y sin CSI, los resultados bajan.

Niños de 12 a 23 meses con esquema completo

Montero: Del total de 171 niños, el 87.1% (149) completaron su esquema antes e cumplir los 2 años de edad. De éstos niños, el 75% (129) completaron su esquema antes de cumplir 13 meses de edad. Se superó la LB de 67.2% y 44% respectivamente.



El Alto: Del total de 171 niños, el 43.3% (74) completaron su esquema antes e cumplir los 2 años de edad. De éstos niños, el 31.6% (54) completaron su esquema antes de cumplir 13 meses de edad. Se superó la LB de 29.8% y 18.1% respectivamente.



Como proyecto, se logró un 65.2% de niños con esquema completo antes de cumplir los dos años de edad. Un 53.5% se completó antes de cumplir los 13 meses de edad, superando la LB de 51.8% y 33.3% respectivamente. Sin embargo no se logró la meta propuesta de 80% para niños menores de 2 años.

Madres que conocen la edad correcta en la que un niño debe completar su vacuna.

En Montero, de un total de 171 madres entrevistadas, un 85% indicaron que hasta los 13 meses de edad sus hijos deben completar sus vacunas (LB 29.8%); y un 3.5% antes de cumplir los 23 meses de edad (LB 44.5%).

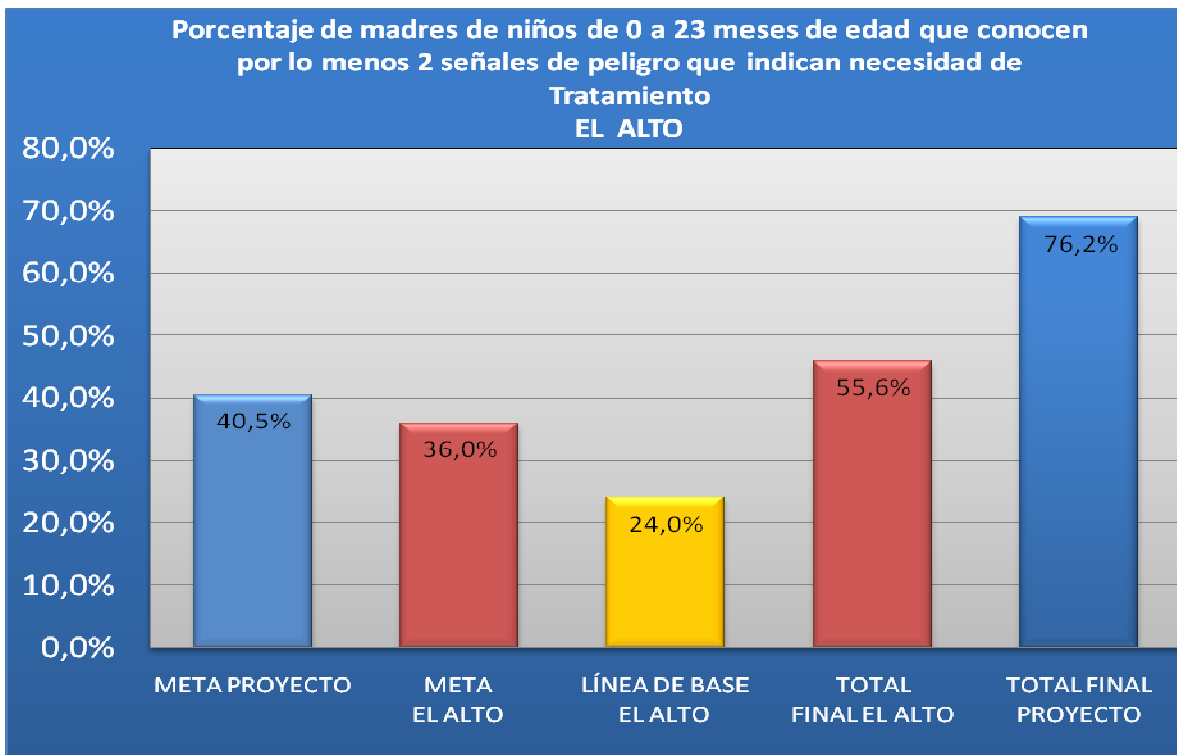
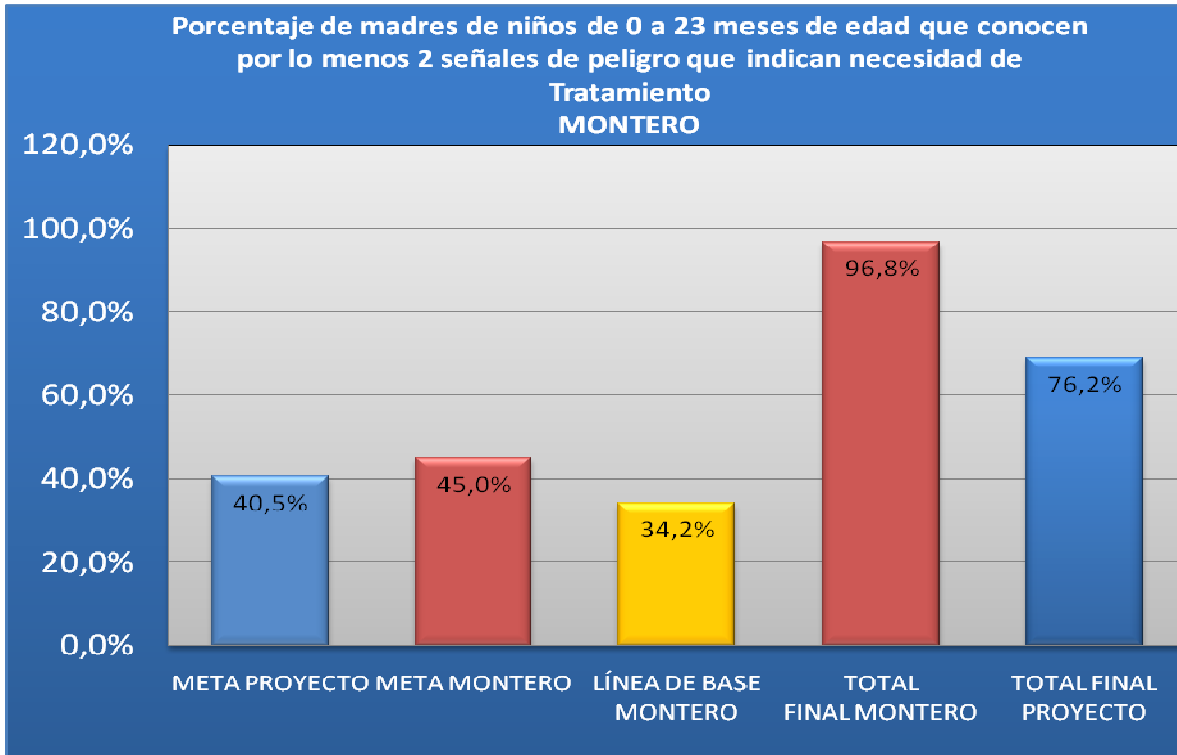
En El Alto, de un total de 171 madres entrevistadas, un 53.2% indicaron que hasta los 13 meses de edad sus hijos deben completar sus vacunas (LB 30.6%); y un 13.5% antes de cumplir los 23 meses de edad (LB 42.4%).

Como proyecto en general, el logro fue de un 69.3 % para madres que respondieron hasta antes de los 13 meses de edad, y un 8.5% hasta los 23 meses de edad. El resultado fue importante superándose los datos de la LB, además de la inversión a favor de antes de los 13 meses de edad, periodo en el cual se considera oportunidad y regularidad de la aplicación de las vacunas según normas del Programa Ampliado de Inmunizaciones del país.

ENFERMEDADES DE LOS NIÑOS

Madres que conocen al menos dos signos que indican necesidad de tratamiento para el niño.

Montero y El Alto: Del total de 342 madres, un 96.8% (331) en Montero, y un 55.6% (190), conocen signos que indican necesidad de tratamiento para el niño. En general tanto como regionales como proyecto, se superaron los resultados de LB y la meta de proyecto de 40.5%, obteniendo un resultado de 76.2%.



Porcentaje de niños menores de 24 meses con diarrea en las dos últimas semanas

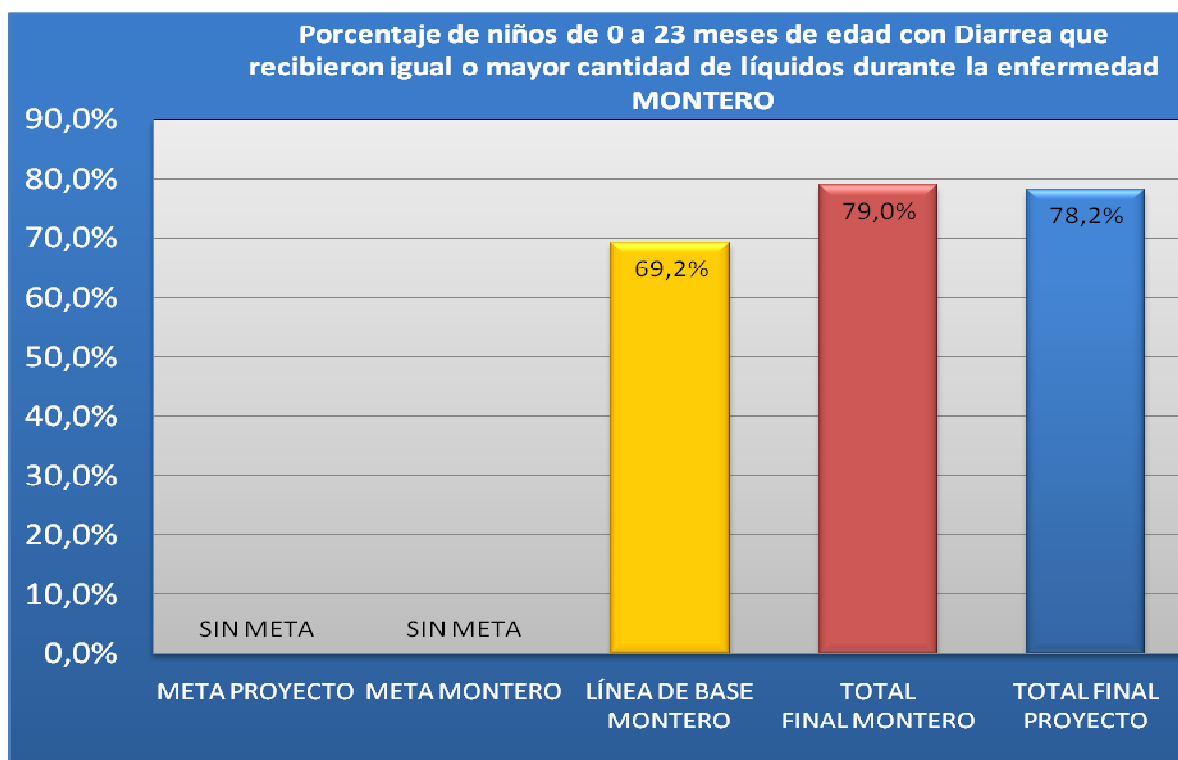
Del total de 342 madres entrevistadas, el 29.2% en Montero, y el 36.5% en El Alto, indicaron que sus niños enfermaron con Diarrea.

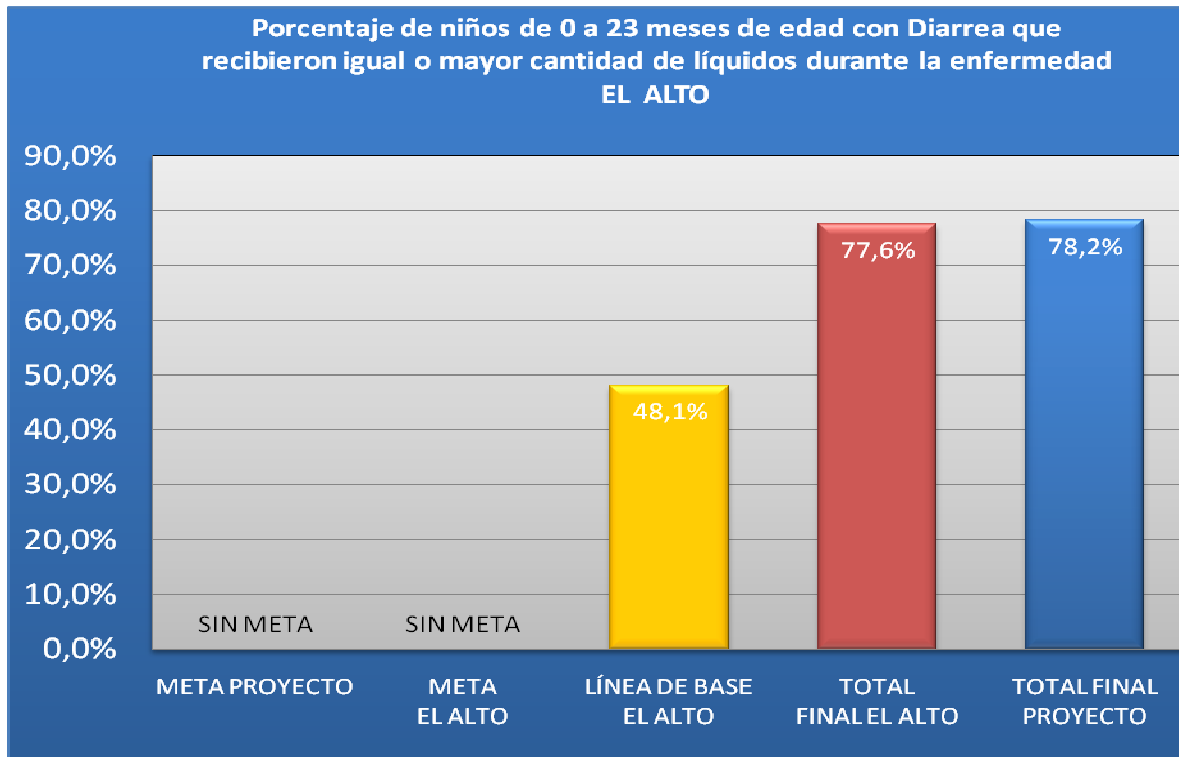
Porcentaje de niños menores de 24 meses con diarrea en las dos últimas semanas que recibieron igual o mayor cantidad leche materna durante la enfermedad.

Del total de niños que enfermaron con diarrea el 70% en Montero, y el 75.2% en El Alto, recibieron igual o mayor cantidad de leche materna durante la enfermedad. Estos valores son similares a los de la LB (93% para Montero, y 75% par El Alto).

Porcentaje de niños menores de 24 meses con diarrea en las dos últimas semanas que recibieron igual o mayor cantidad de líquidos durante la enfermedad.

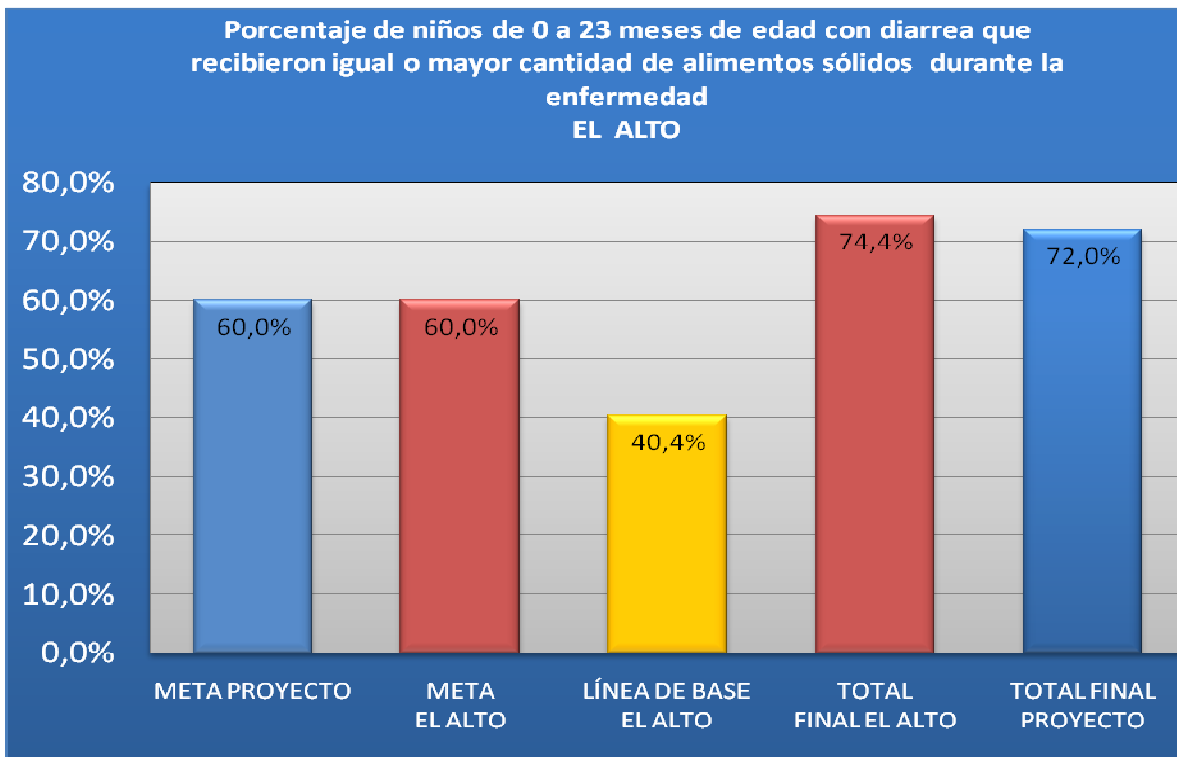
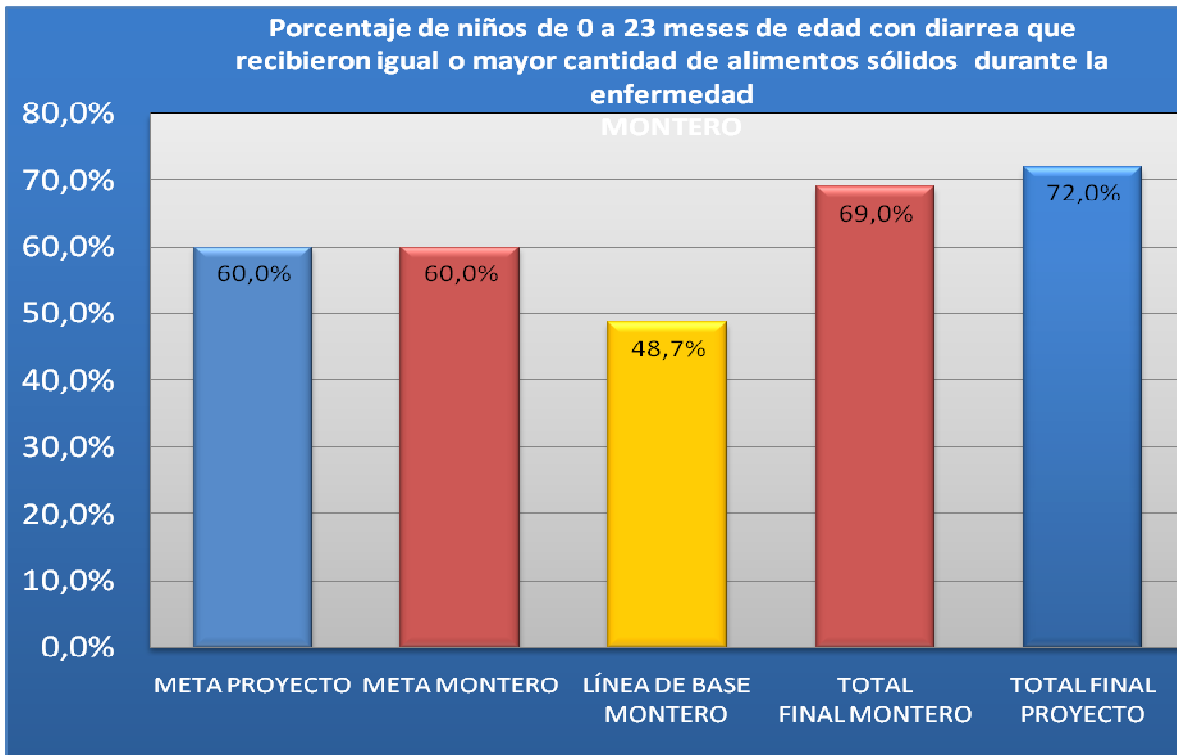
Montero: De 100 niños que enfermaron, 79 niños (79%), y en El Alto, de 125 niños enfermos, 97 (77.6%) recibieron igual o mayor cantidad de líquidos. Como proyecto se logró un 78.2%, superando los resultados de LB de 60.8%.





Porcentaje de niños menores de 24 meses con diarrea en las dos últimas semanas que recibieron igual o mayor cantidad de alimentos sólidos durante la enfermedad.

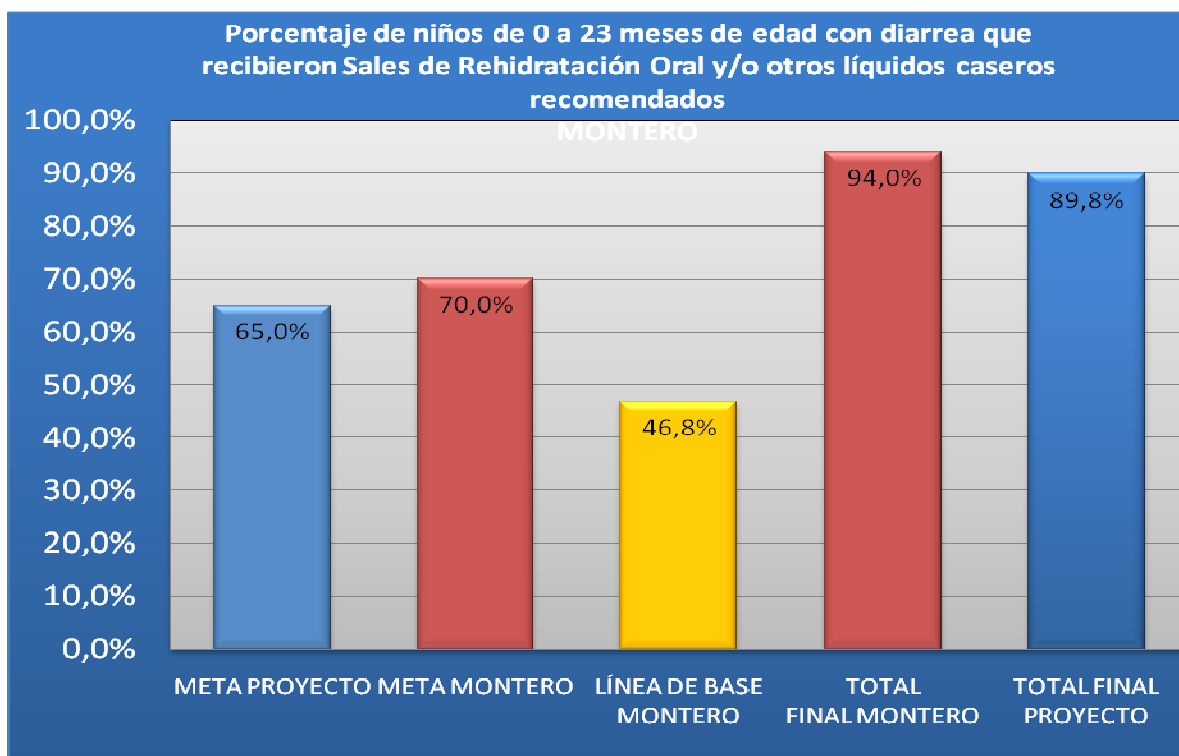
Montero: De los 100 niños que enfermaron, 69 niños (69%), y en El Alto, de los 125 niños enfermos, 93 (74.4%) recibieron igual o mayor cantidad de alimentos sólidos durante la enfermedad. Como proyecto se logró un 72%, superando los resultados de LB de 45.4%.

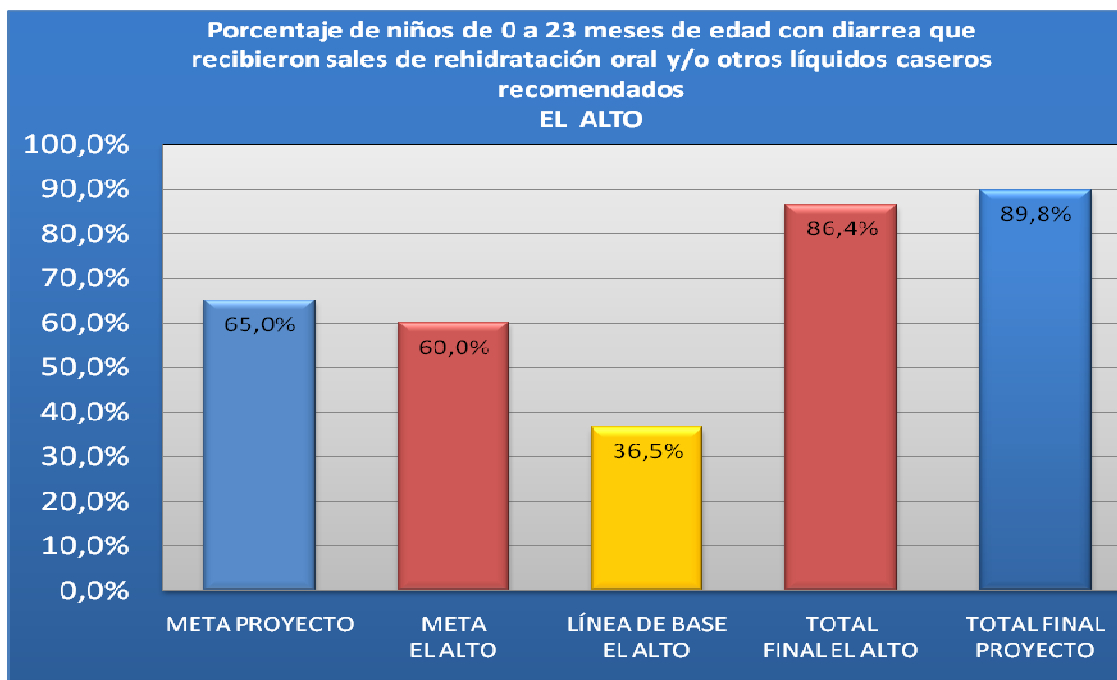


Porcentaje de niños menores de 24 meses con diarrea en las dos últimas semanas que recibieron SRO y otros líquidos caseros recomendados.

En Montero, del total de 100 niños que enfermaron con Diarrea, el 94% recibieron Sales de Rehidratación oral y otros líquidos caseros según sus madres. En El Alto, de los 125 niños con diarrea, el 86.4% (108) recibieron tratamiento recomendado de rehidratación.

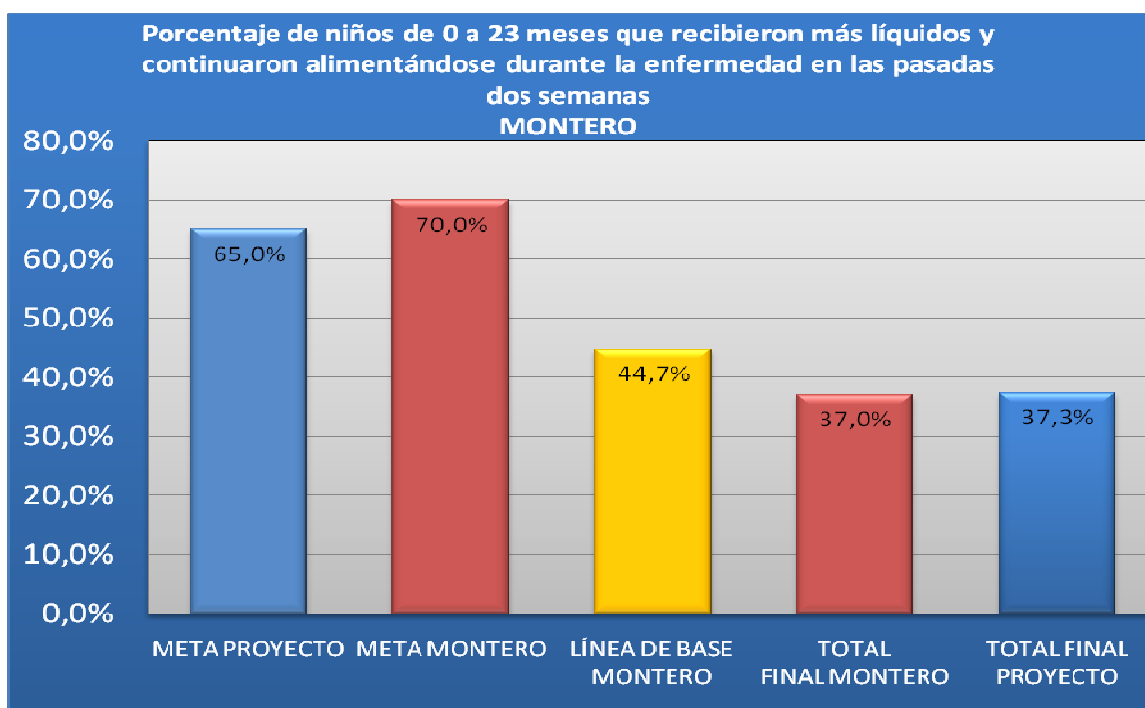
Como proyecto, se logró sobrepasar la meta de 65%, alcanzándose un 89.8%.

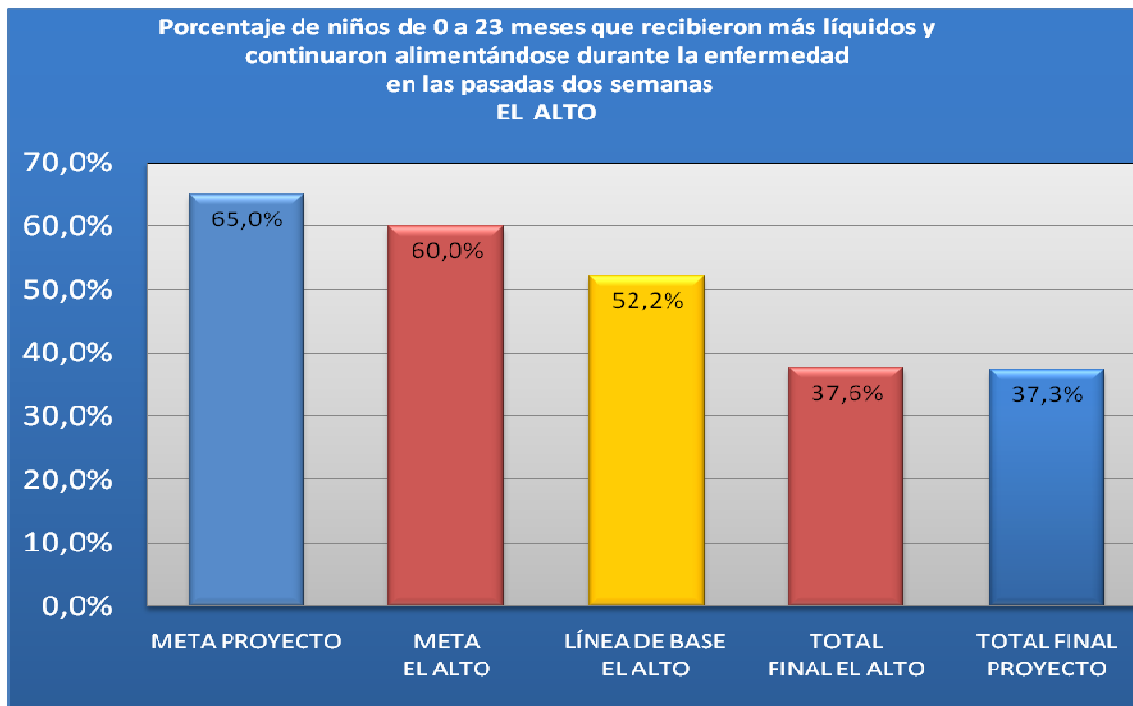




Porcentaje de niños menores de 24 meses con diarrea en las dos últimas semanas que durante la enfermedad recibieron más líquidos y continuaron alimentándose.

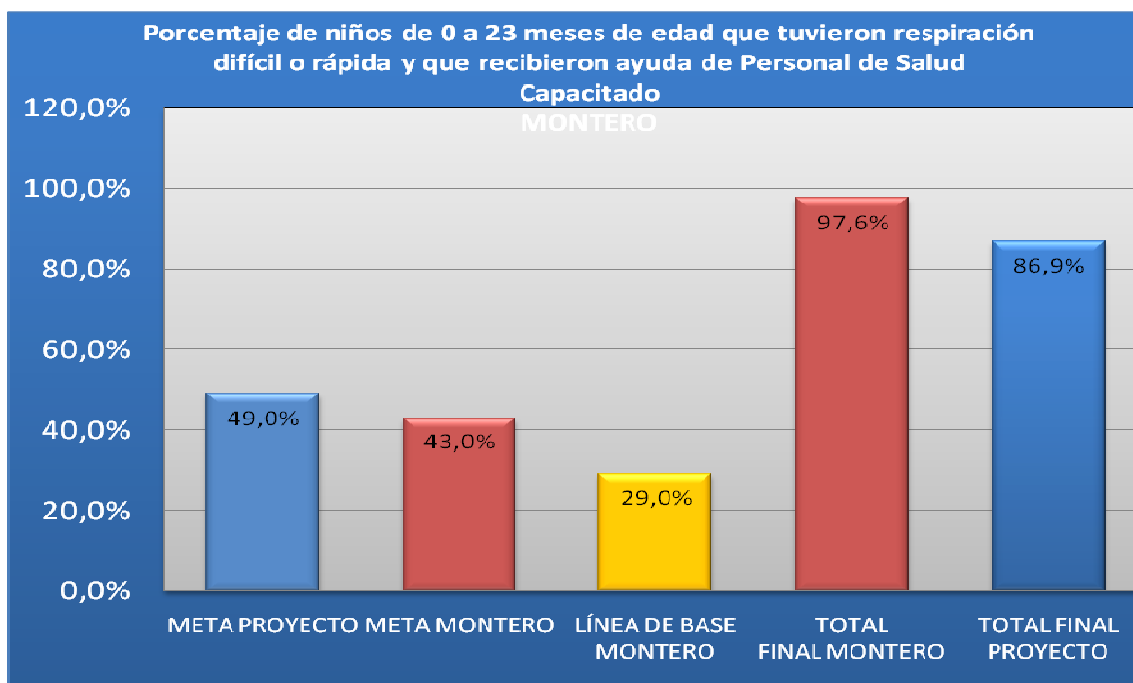
En Montero, de los 100 niños que enfermaron con Diarrea, el 37% recibieron más líquidos y continuaron con su alimentación durante la enfermedad. En El Alto, de los 125 niños con diarrea, el 37.6% (47) adoptaron el comportamiento mencionado. Como proyecto, se logró un 37.3% no alcanzando la meta de 65%.

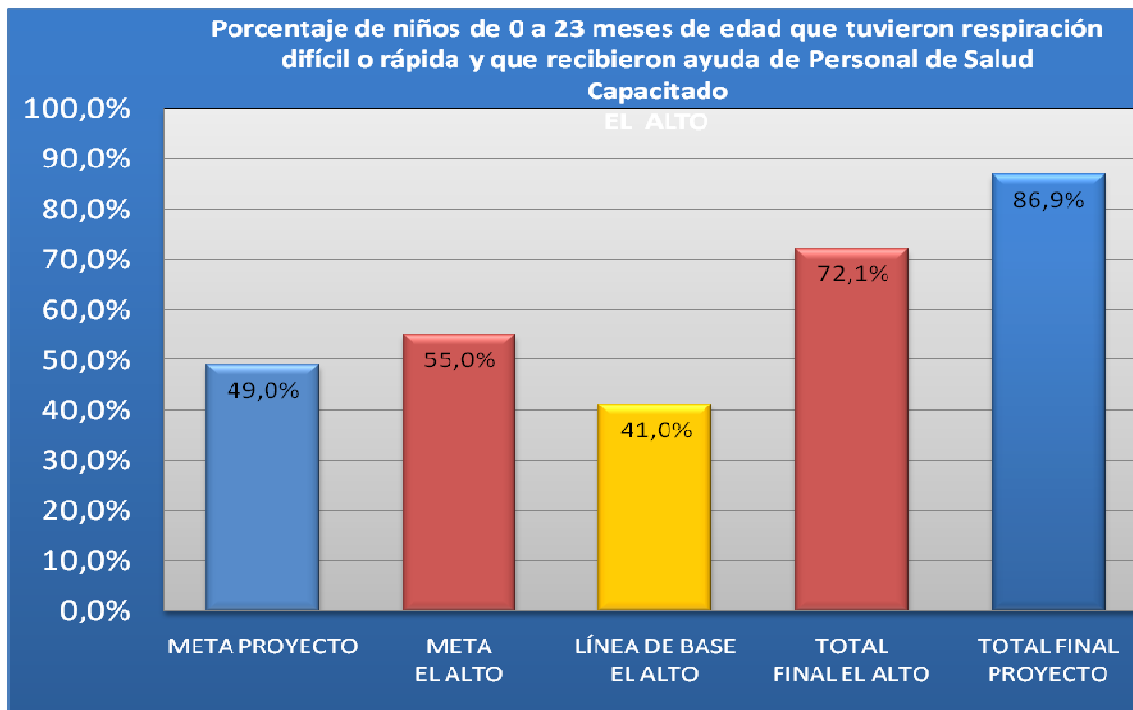




Porcentaje de niños menores de 24 meses con respiración rápida o difícil en las 2 últimas semanas que recibieron ayuda de personal de salud.

En Montero, del total de niños enfermos (84), 82 madres (97.6%) pidieron consejo y ayuda del personal de salud. En El Alto, de 61 niños enfermos, 44 (72.1%) buscaron ayuda médica. Como proyecto, se logró superar la meta de 49%, alcanzando un 86.9%.





EMBARAZO

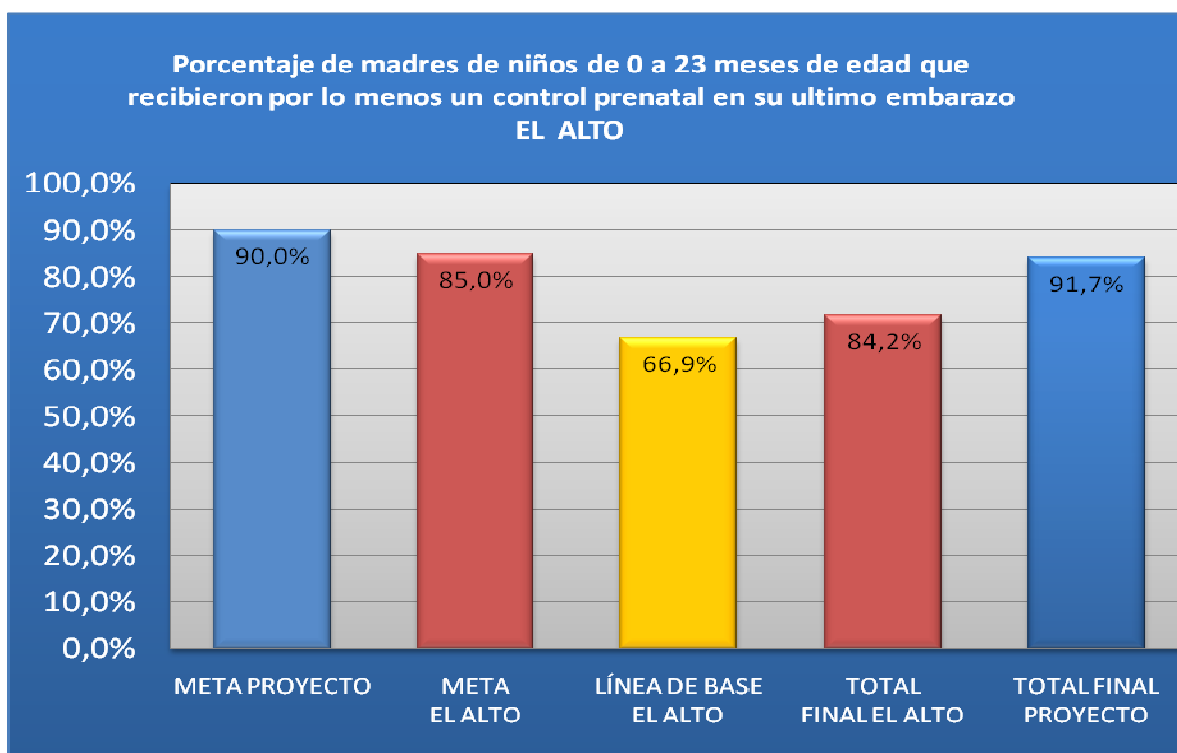
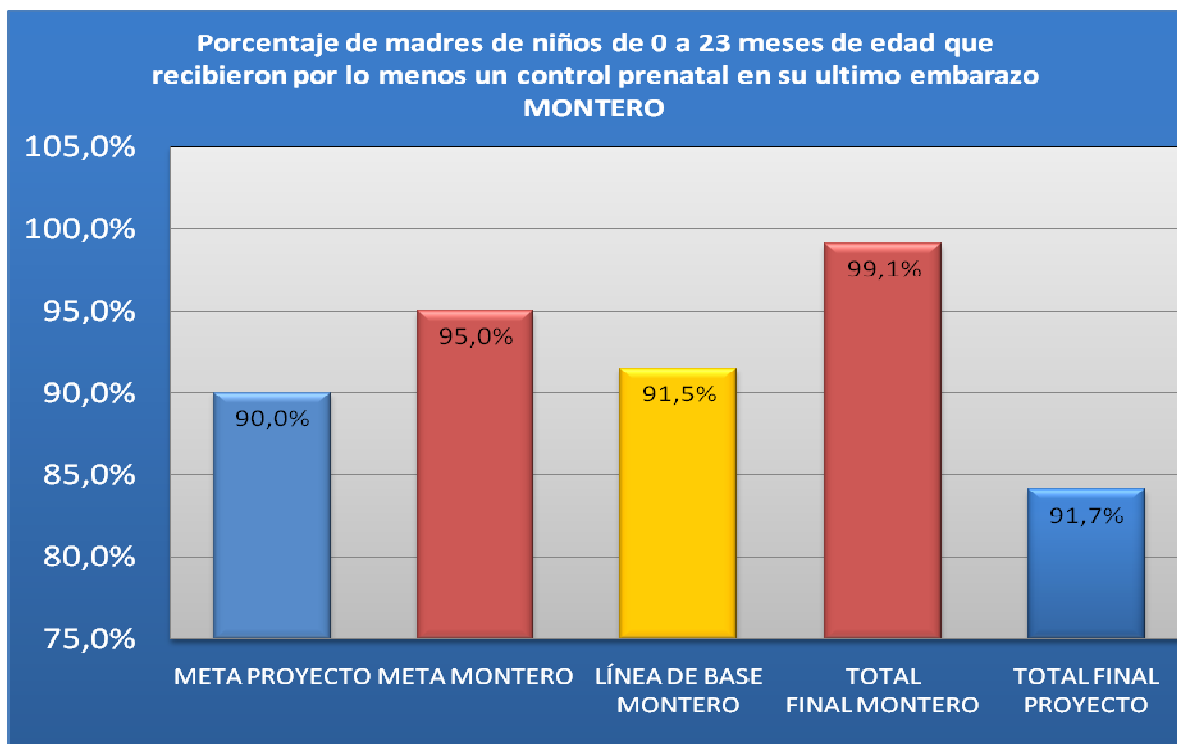
Porcentaje de madres que se hicieron controlar en su último embarazo

Del total de 342 entrevistas, el 99.1% en Montero, y el 86.8% en El Alto, refirieron haberse hecho controlar en su último embarazo con personal de salud calificado. Este es un logro importante para ambas regionales, donde se superaron los resultados de LB (93% par Montero y 70.1% para El Alto).

Porcentaje de madres que recibieron al menos 1 control prenatal por personal de salud en su último embarazo.

En Montero, de las 342 madres entrevistadas, el 99.1% (339) refieren que recibieron al menos 1 control prenatal por Personal de Salud. En El Alto, de 342 madres entrevistadas, el 84.2% (288) recibieron al menos un control prenatal en su último embarazo.

Como proyecto, se superó la meta establecida de 90%, teniendo un resultado de 91.7%.

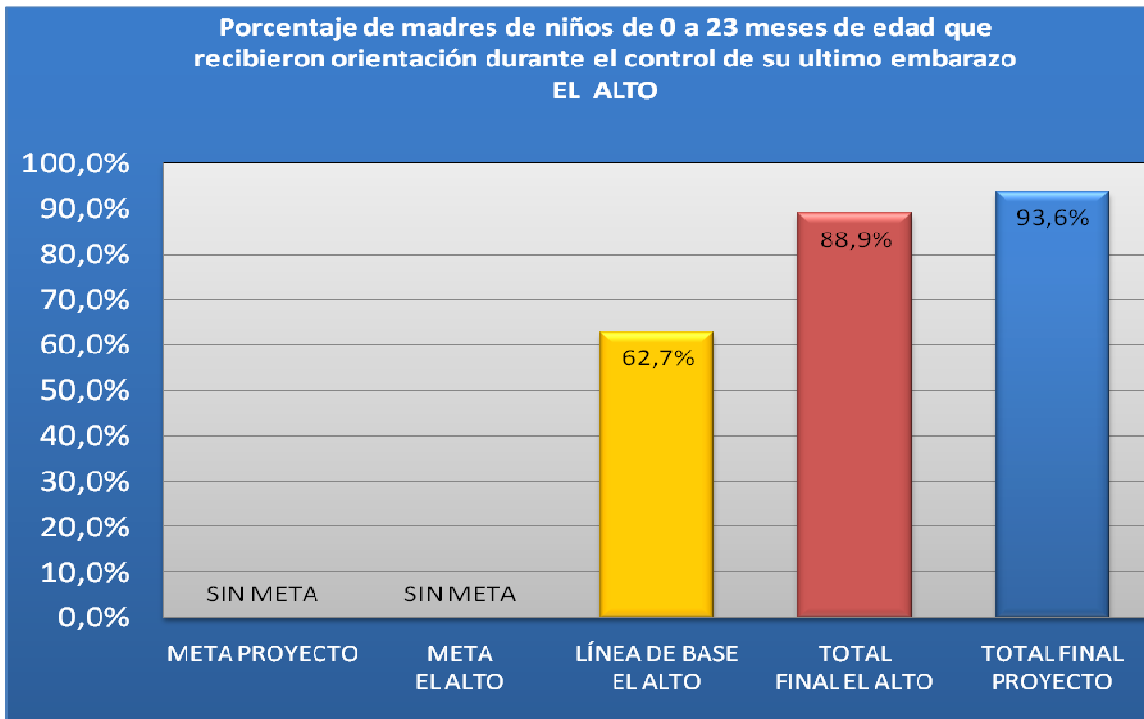
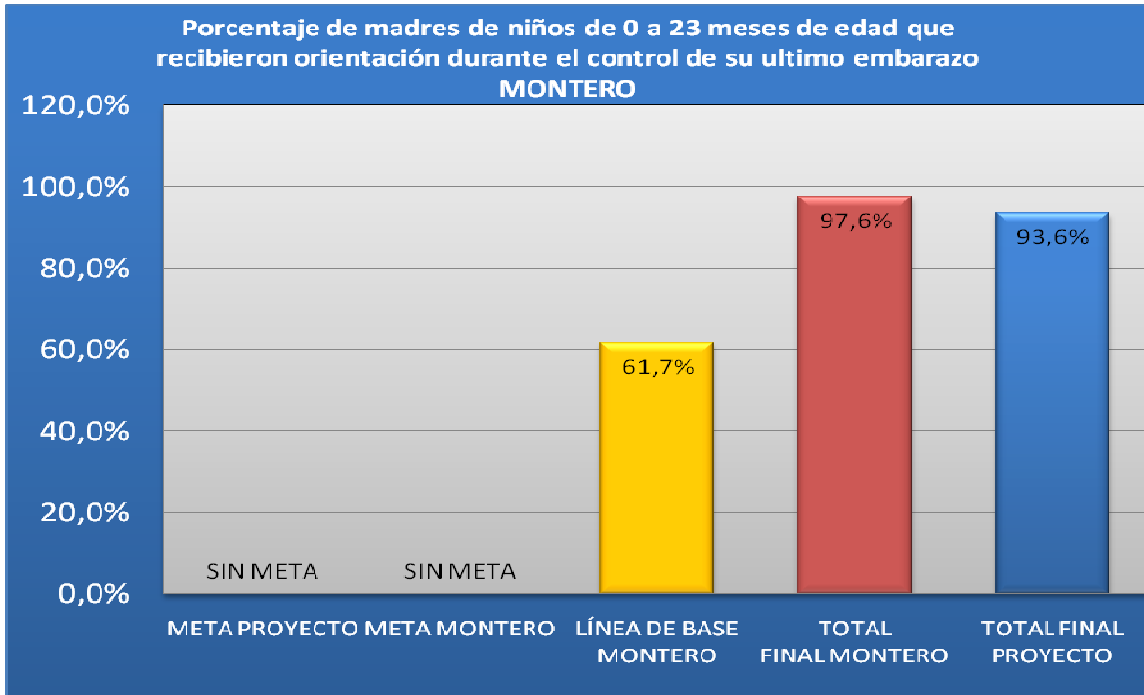


Porcentaje de madres que recibieron orientación durante su último embarazo.

En Montero, del total de madres que recibieron control prenatal por personal de salud en su último embarazo (339) el 97.6% (331) recibieron orientación en alguno de temas

como: preparativos del parto, lactancia, espaciamiento de embarazo, vacunas y señales de peligro del embarazo. En El Alto, de 288 madres que recibieron control prenatal en su último embarazo, el 88.9% (256) recibieron orientación en los temas mencionados.

Como proyecto, se logró superar la LB de un 62.1% a un 93.6%.

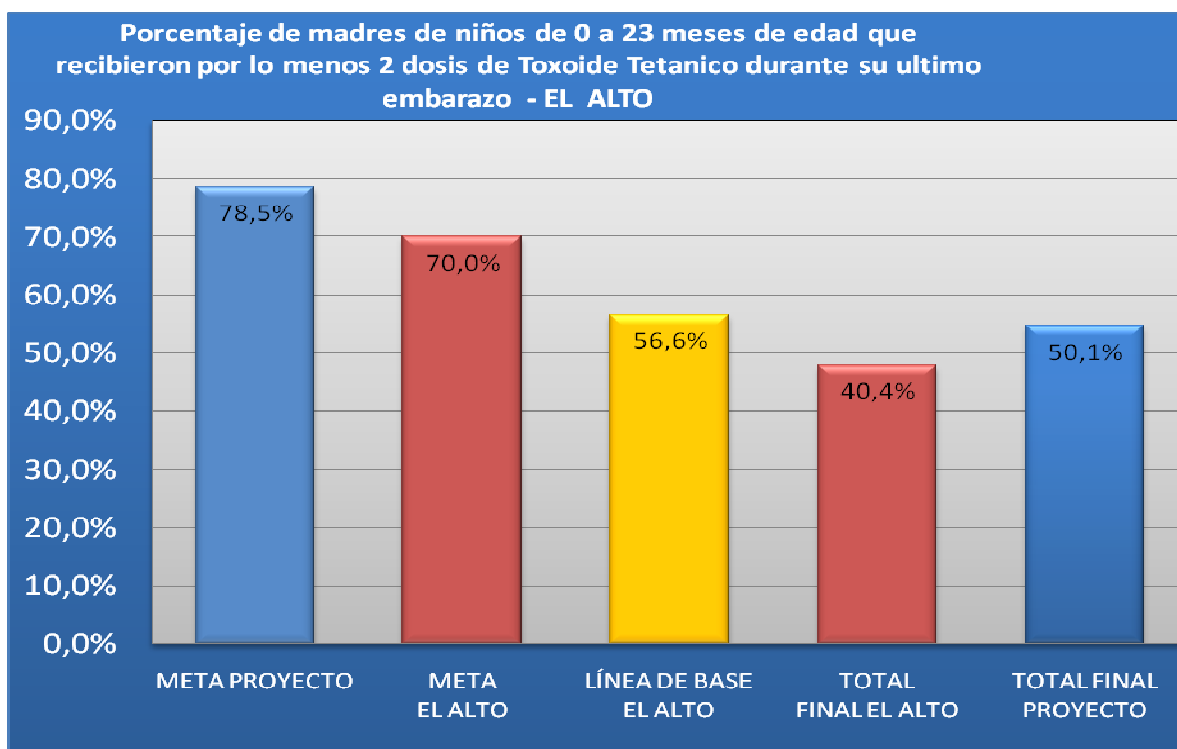


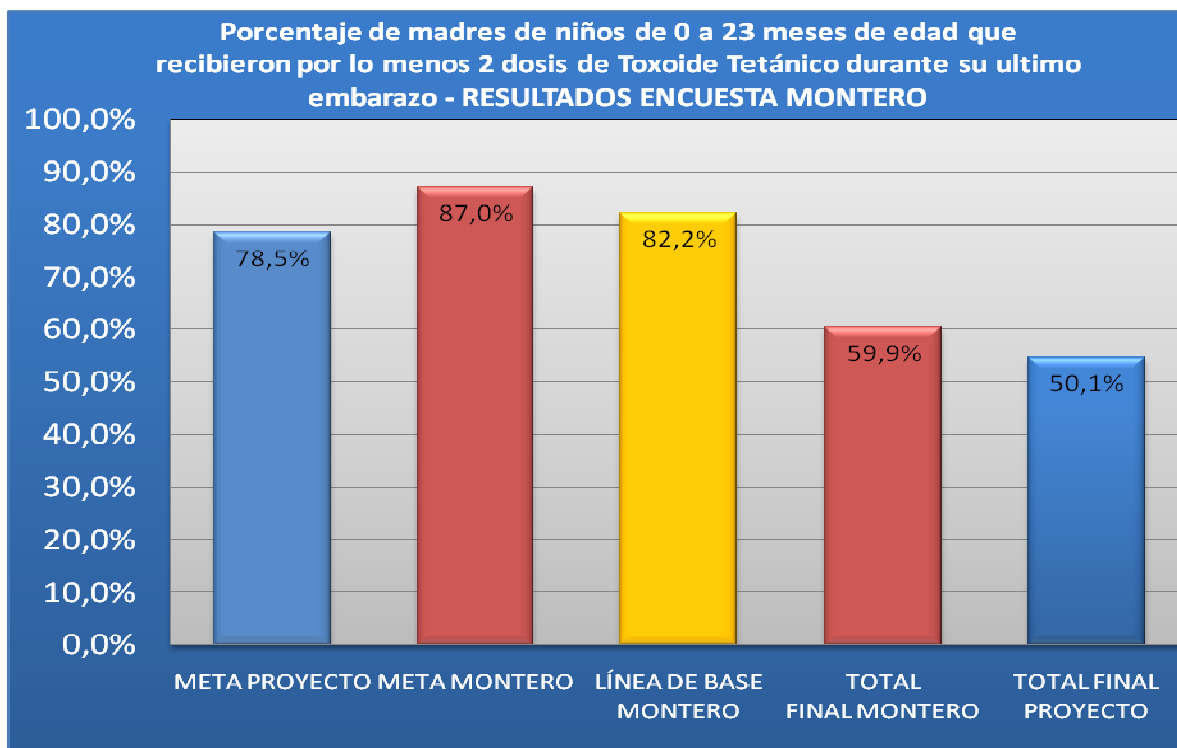
Porcentaje de madres que recibieron por lo menos dos dosis de Toxoide Tetánico durante su último embarazo.

Montero, de las 342 madres entrevistadas, el 59.9% (205) indican que recibieron una dosis de TT durante su último embarazo. En El Alto, de las 342 madres entrevistadas, el 40.4% (138) refirieron haber recibido la vacuna mencionada.

Como proyecto, se logró alcanzar un 50.1%, siendo la meta de un 78.5%. Es importante mencionar en este aspecto que en la LB se consideró solamente una dosis de la vacuna, lo cual no hace comparable este resultado con la mencionada información.

También se evaluó, el esquema completo con la vacuna toxoide tetánico (5 dosis). Montero logró un 28.3% del total de su población de mujeres de 20 a 24 años de edad. El Alto, logró 21.3%. superando ambos la meta del proyecto de 18.5%.





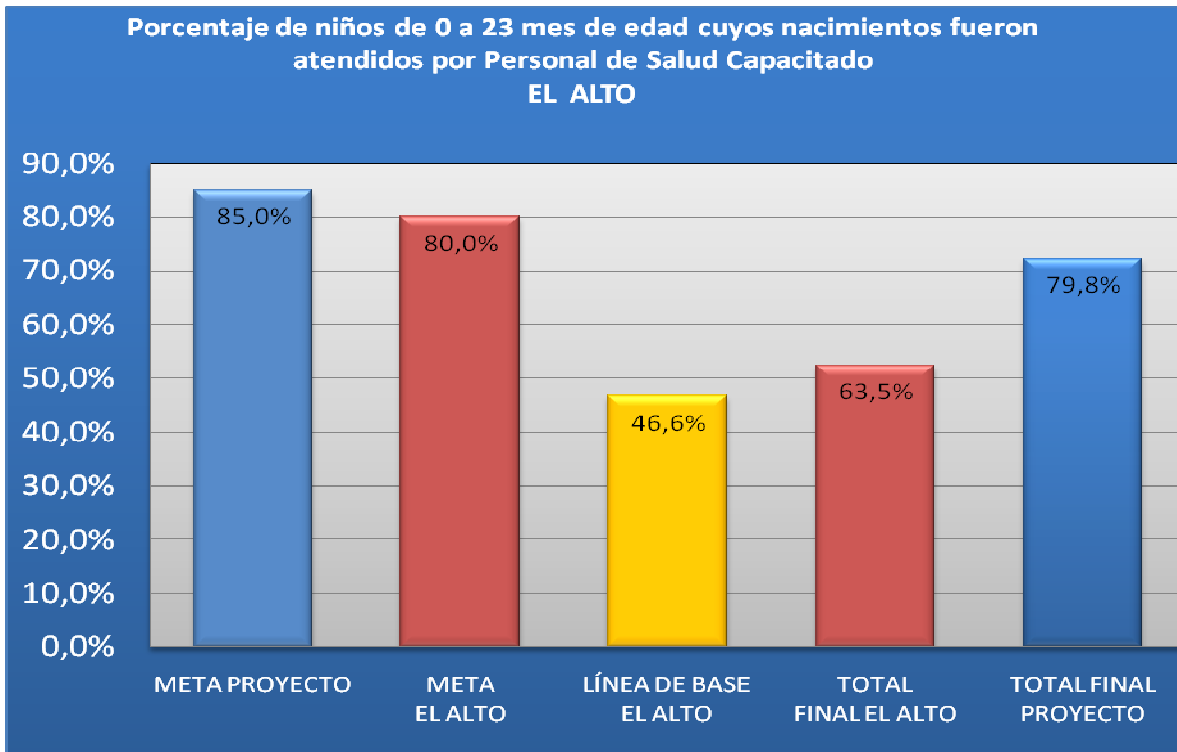
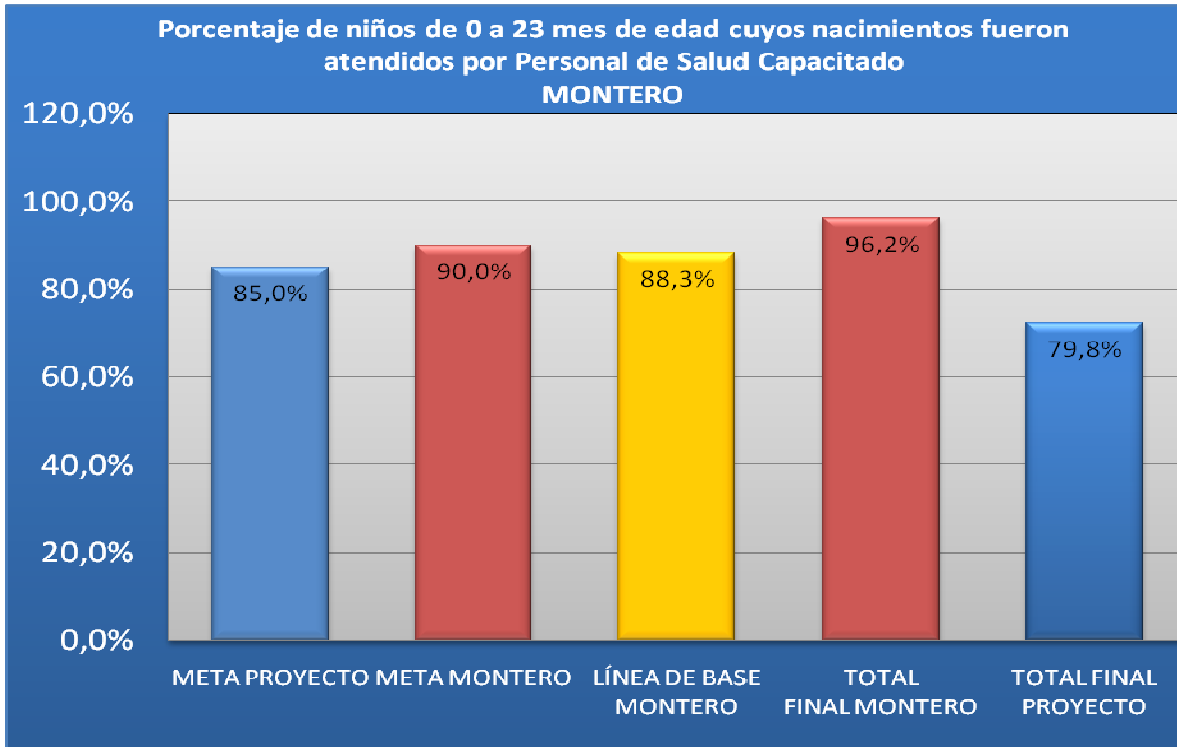
PARTO

Atención del parto por Personal de Salud

En Montero, de 342 mujeres entrevistadas, 329 (96,2%) refirieron haber sido atendidas por Personal de Salud (tanto en domicilio como en un establecimiento de Salud). En El Alto, del total de 342 mujeres entrevistadas, 217 (63.5%), refirieron la atención de su parto por personal de salud.

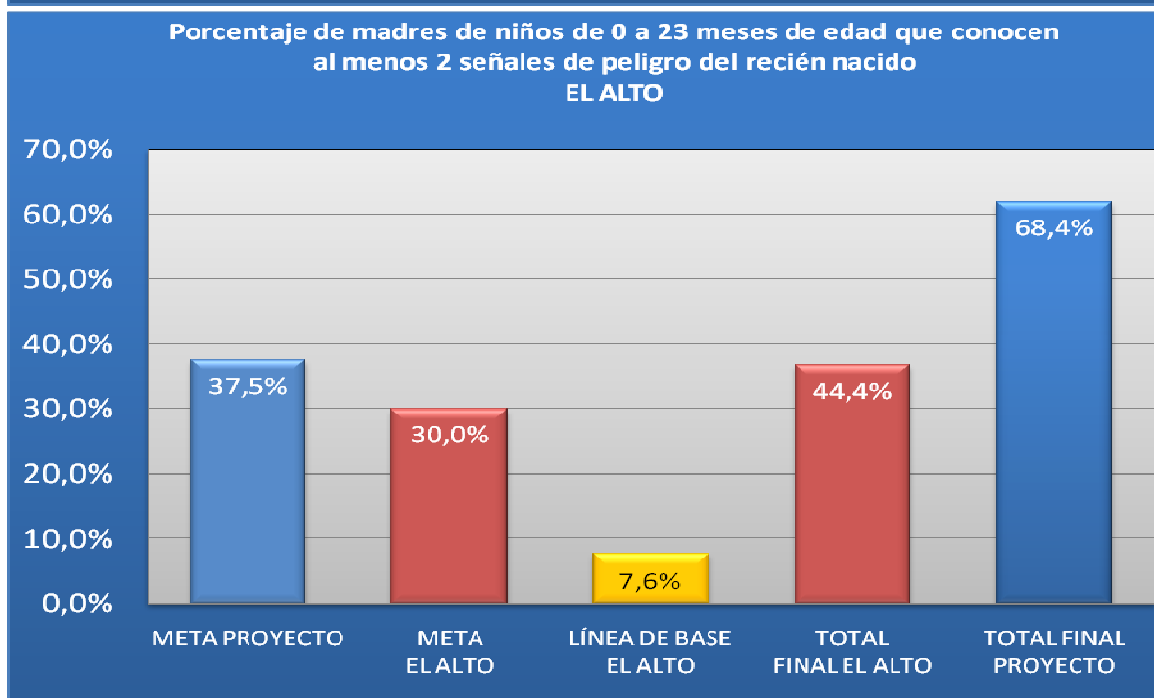
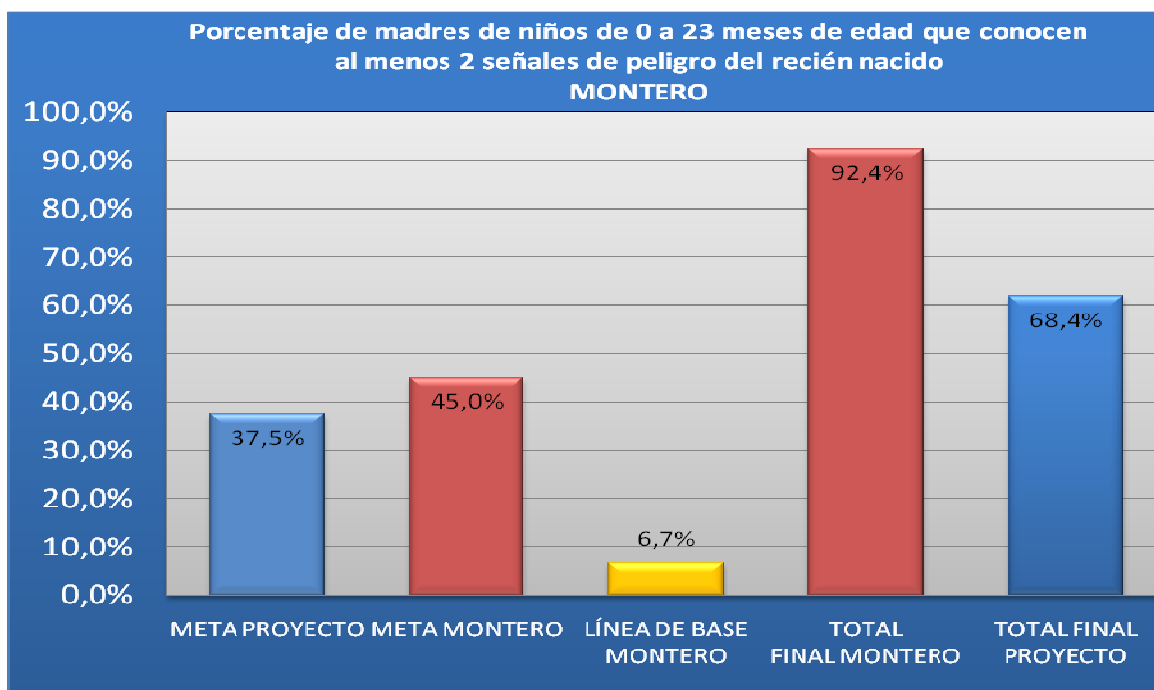
Como proyecto, se logró un 79.8%, superándose la LB de 67.5%. Sin embargo no se alcanzó la meta de 85%.

Se aprecia el mismo fenómeno que en la LB, donde se observó una cascada descendente referente a los CPN realizados que tienen gran cobertura, pero disminuyen en relación de la atención del Parto y mucha más disminución en cuanto a la atención del puerperio que es muy baja.



Conocimiento de al menos 2 signos de peligro en el neonato.

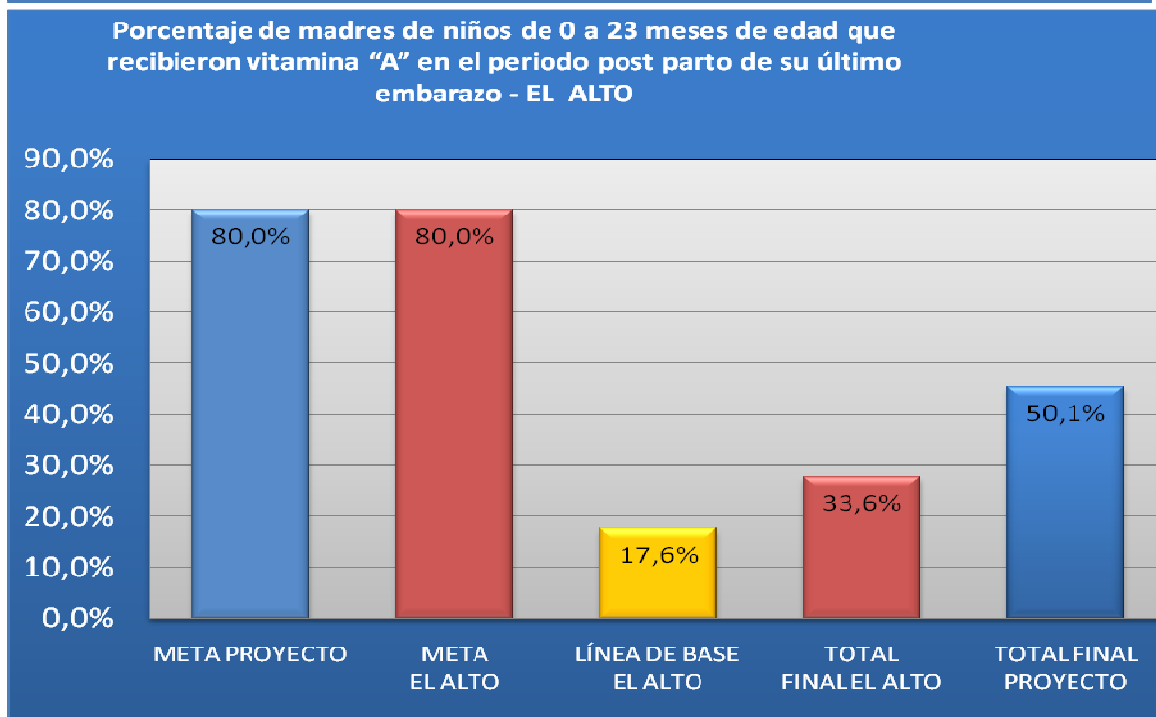
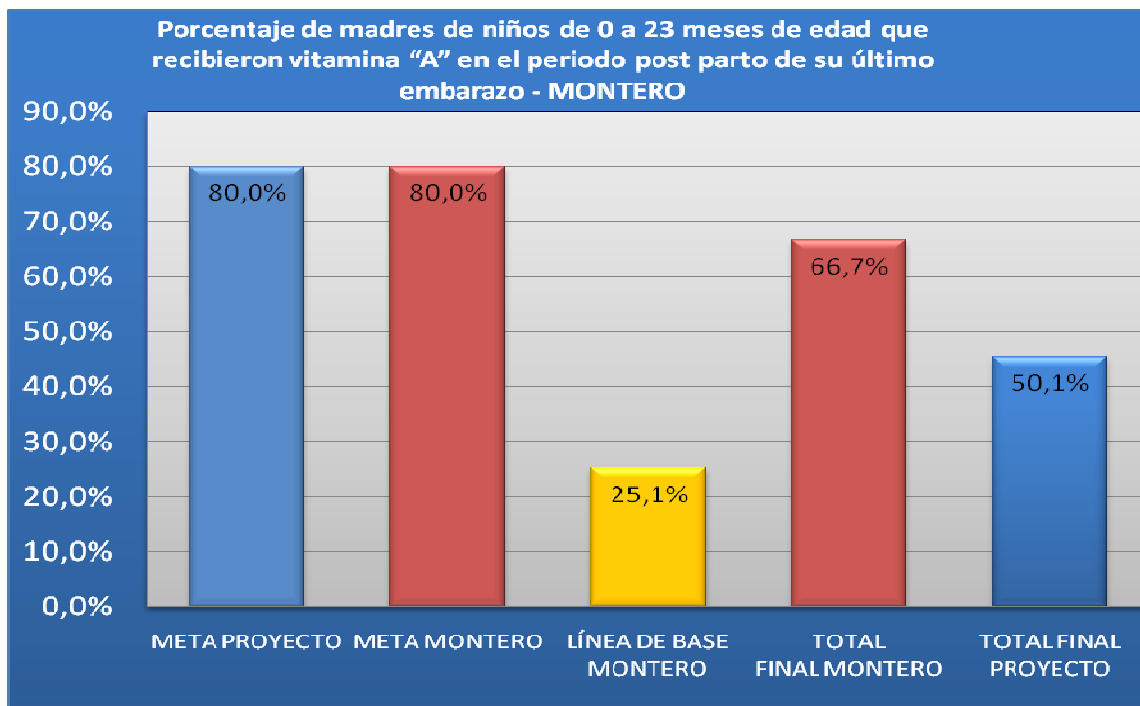
Montero, del total de madres entrevistadas (342) el 92.4% (316) conocen por lo menos dos signos de peligro del Neonato. Se superó significativamente el resultado de LB de era de 6.7%. En El Alto, de las 342 madres entrevistadas, el 44.4% (152) respondió positivamente, también en este caso se superó significativamente la LB (7.6%). Como proyecto, prácticamente casi se duplicó la meta establecida de 37.5%, lográndose un 68.4%.



Porcentaje de madres que recibieron Vitamina "A" en el puerperio

En Montero, de las 342 entrevistas a puérperas, el 66.7% (228) indicaron haber recibido vitamina "A" durante los dos primeros meses después del parto. En el caso de El Alto, el resultado fue del 33.6% (115 de 342 entrevistadas).

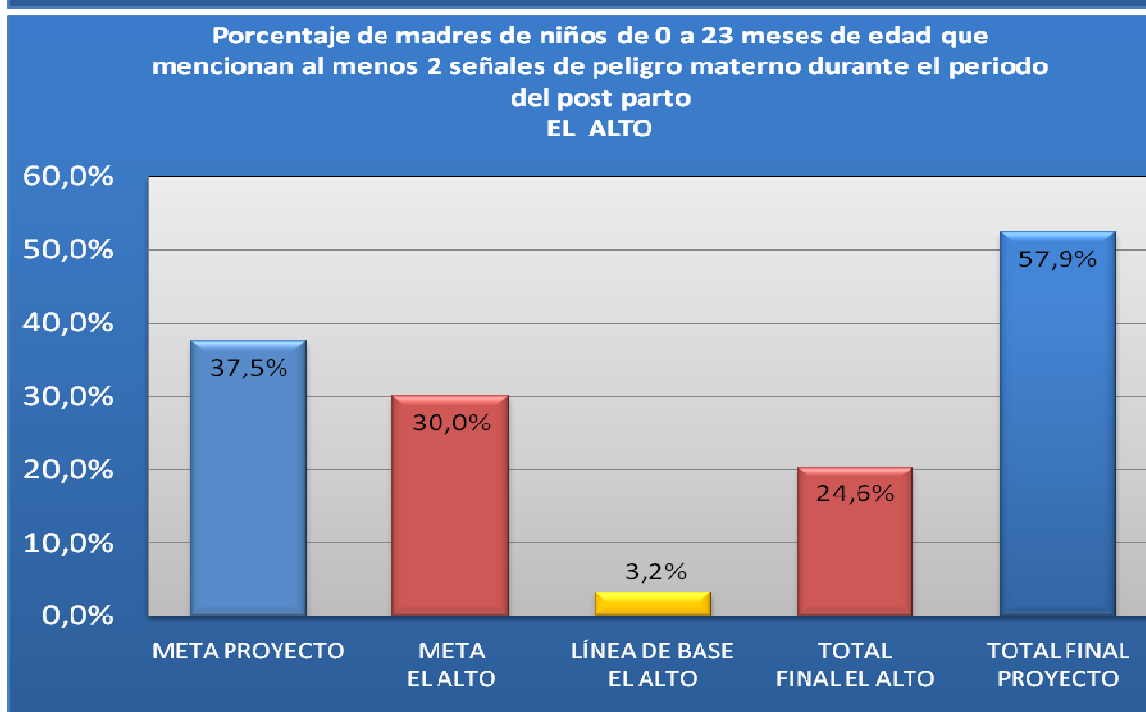
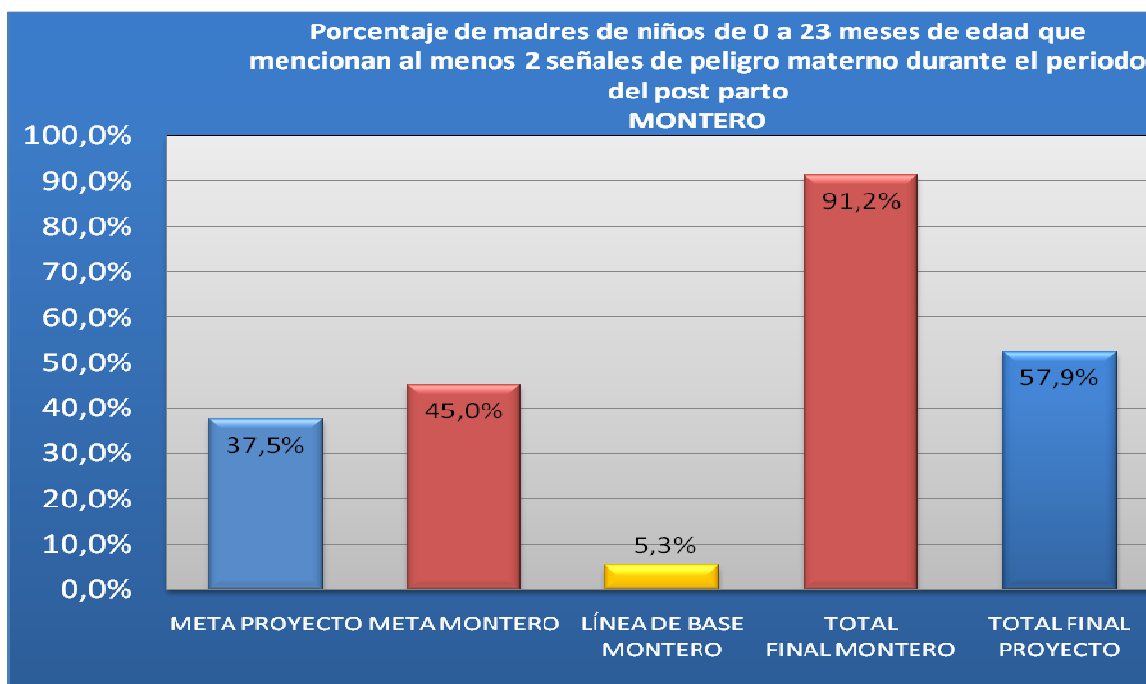
Como resultado general del proyecto, se logró un 50.1%, superándose la LB (21.4%), pero sin alcanzar la meta de 80%.



Conocimiento de al menos 2 signos de peligro en el puerperio.

En cuanto a conocimiento de las madres sobre signos de peligro en el puerperio, en Montero, el 91.2% (312 de 342) conocen al menos dos signos de peligro. Para el caso de El Alto, el resultado fue del 24.6% (84 de 342). En ambos casos se superaron los resultados de LB de 5.3% y 3.2% respectivamente.

Como resultado general de proyecto, se logró superar la meta establecida de 37.5%, alcanzándose un 57.9%.

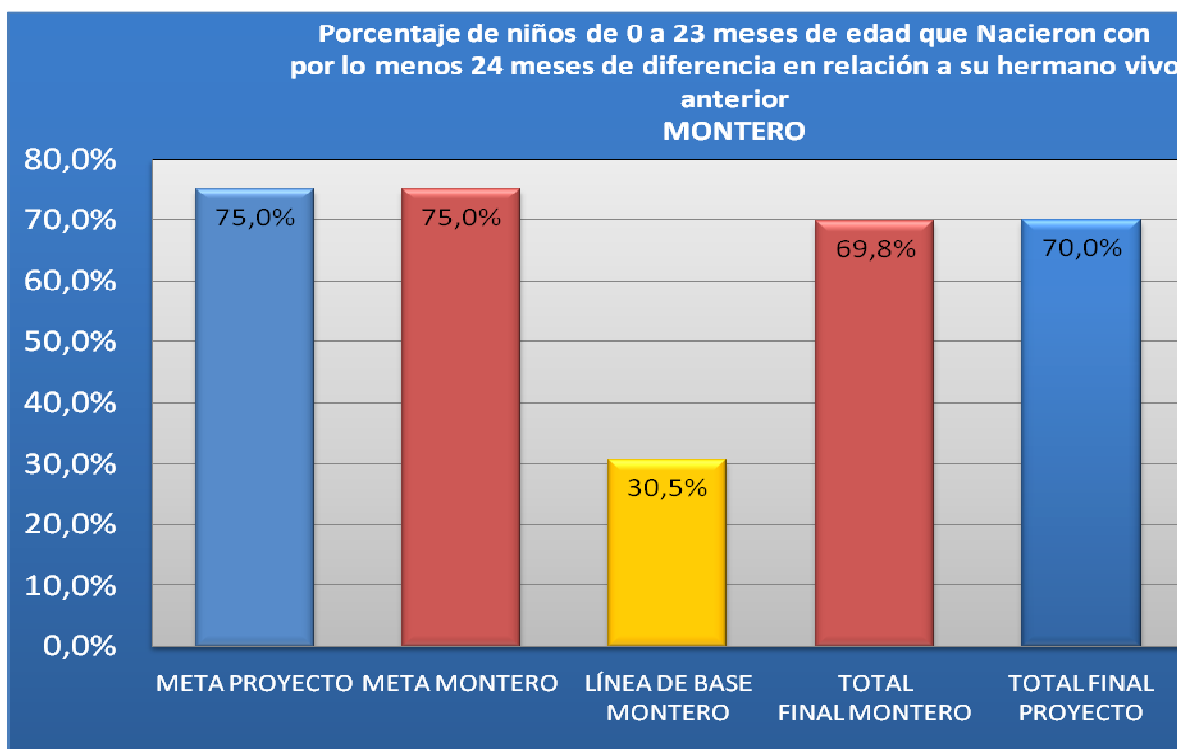


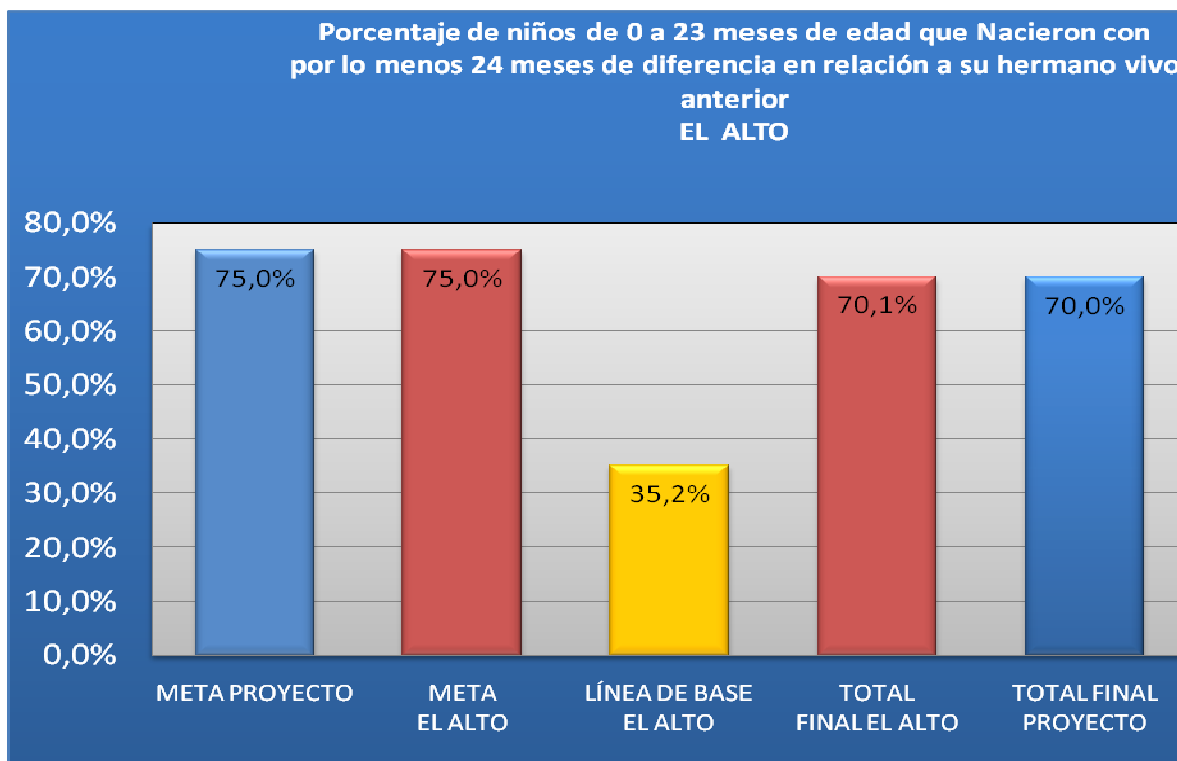
ESPACIAMIENTO GESTACIONAL

Porcentaje madres cuyos hijos menores de 5 años nacieron con un intervalo de al menos 24 meses

El resultado en Montero es, de 126 madres que tenían al menos 2 niños menores de 5 años, el intervalo de 24 meses entre nacimientos representa el 69.8% (88). Para el caso de El Alto, de 157 madres con las características mencionadas, el 70.1% (110) cumplieron con el periodo intergenésico buscado.

En líneas generales, como proyecto, se logró superar los resultados de LB (32.9%), casi alcanzando la meta establecida de 75%, logrando al final del proyecto un 70%.





Porcentaje madres cuyos hijos menores de 5 años nacieron con un intervalo de al menos 36 meses

Del total de madres que tenían al menos 2 niños menores de 5 años Montero alcanzó el 19% (LB 8.4%). El Alto, alcanzó el 21.7% (LB 11.5%). Para ambas regionales se superaron los resultados de LB y como proyecto se alcanzó el 20.5%.

Porcentaje de madres que no desean tener un hijo en los próximos 2 años.

De las madres con niños de 12 a 23 meses de edad que no estaban embarazadas en momento de la encuesta, el 91.5% en Montero (LB 93.1%), el 84.8% en El Alto (LB 85.9%), no desean tener otro niño en los siguientes dos años. En términos generales no se ven variaciones importantes en este indicador.

Porcentaje de madres que no desean tener un hijo en los próximos dos años y que utilizan un método de planificación familiar moderno.

El porcentaje de madres que no desean tener un hijo en los siguientes 2 años y refieren estar cuidándose o realizando Planificación familiar, en Montero fue del 67.8% (LB 92.4%), y en El Alto, fue del 64.9% (LB 83,5%). De estas mujeres utilizan un método moderno de planificación familiar, en Montero un 69%, y en El Alto un 41.4%.

Conocimiento de un lugar donde obtener un método anticonceptivo

Del total de 342 encuestadas para cada regional, el nivel de conocimiento en madres de niños de 12 a 23 meses de edad, sobre un lugar donde obtener un método anticonceptivo, en Montero fue del 100% (LB 87.5%), y en El Alto fue del 77.2% (LB 63.1%)

En ambos casos mejoró este indicador con relación a los resultados de LB, siendo el resultado como proyecto del 88.6%.

VIH/SIDA

Porcentaje de madres que han escuchado hablar de la enfermedad.

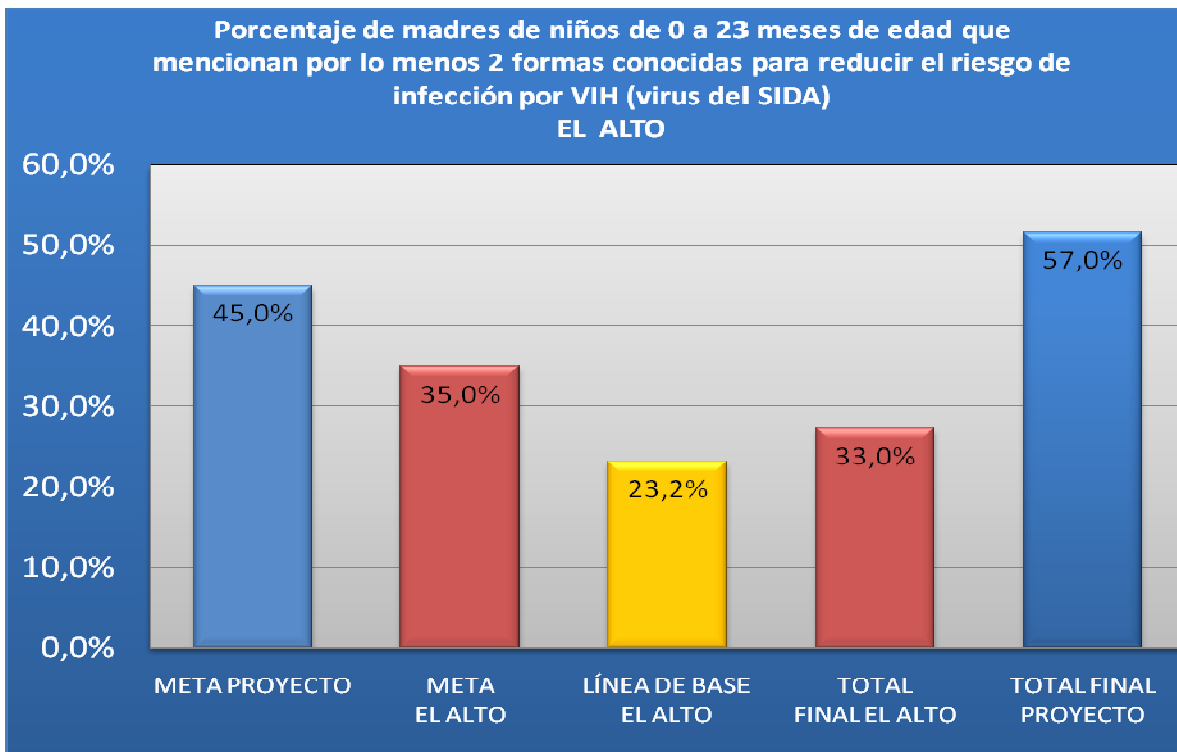
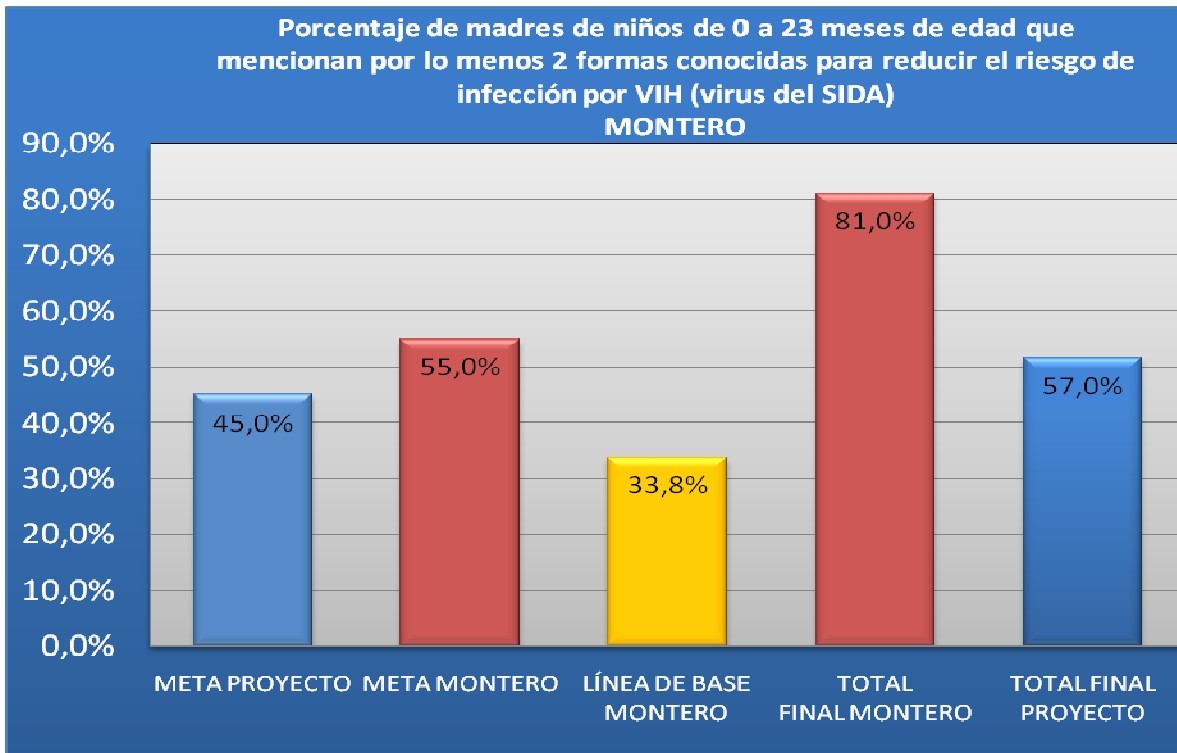
Del total de 342 madres entrevistadas, en Montero el 92.1% (LB 88.3%), y en El Alto 81.9% (LB 78,3%), refirieron haber escuchado hablar sobre el SIDA. En ambas regionales los resultados mejoraron con relación a los obtenidos en la LB. Como proyecto el resultado fue del 87%.

Porcentaje de madres que han escuchado hablar de la enfermedad y conocen al menos 2 formas de prevenirla.

En Montero, del total de madres entrevistadas 342, el 81% (277) conocen por lo menos dos formas o conductas adecuadas para evitar el riesgo de infección por el SIDA. En El Alto, de las 342 entrevistadas, el 33% (113) respondieron correctamente.

El resultado como proyecto, fue de 57%, superando la meta establecida para el proyecto de 45%.

Es importante mencionar que dentro de las alternativas mencionadas, se encuentran las 4 conductas clave que son abstención, uso de condón, fidelidad con la pareja, evitar uso de objetos punzo cortantes.



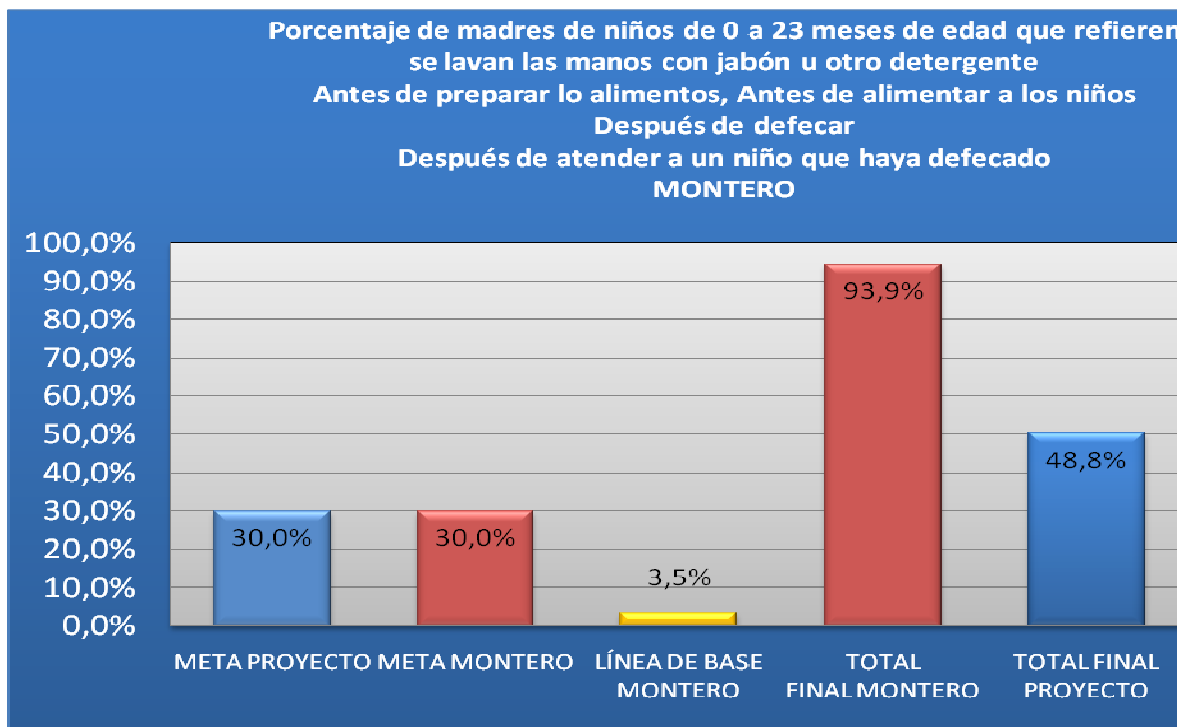
AGUA Y SANEAMIENTO BASICO

Familias con lugar específico para el lavado de manos.

De las 342 madres entrevistadas, para cada regional, en Montero el 100% (LB 54.1%), y en El Alto 98.8% (LB 43.7%), indica que tiene un lugar específico para el lavado de manos; Para ambas regionales hubo un importante incremento en el resultado de este indicador.

Porcentaje de madres que refieren prácticas adecuadas de lavado de manos con jabón

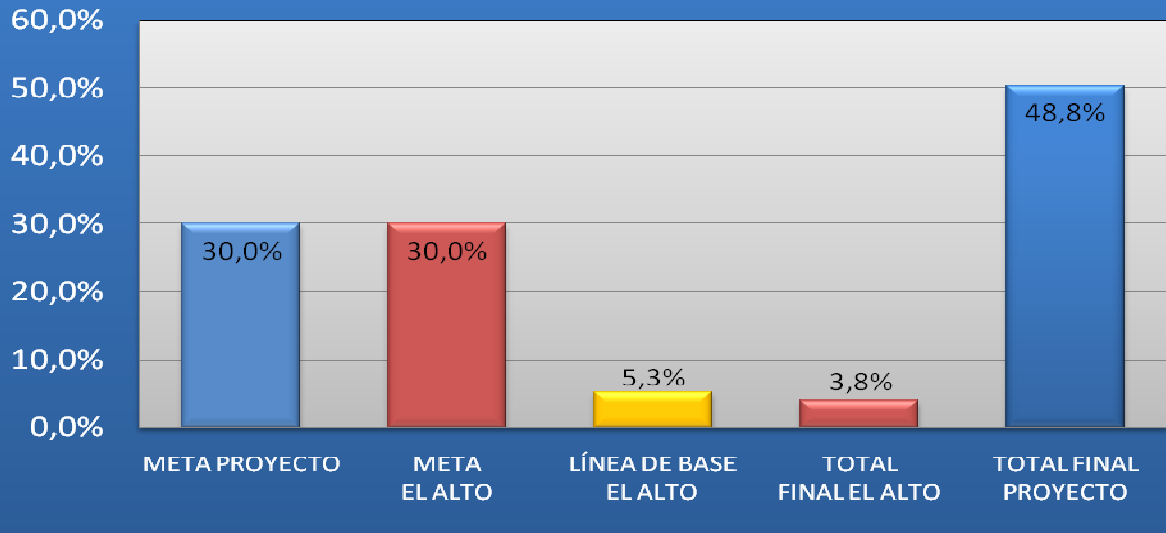
En Montero, del total de madres entrevistadas (342) el 93.9% (321) refiere la totalidad de prácticas de lavado de manos con jabón adecuadas (antes de preparar alimentos, antes de alimentar a los niños, después de defecar y después de atender a un niño que ha defecado). Se incrementó significativamente el resultado con respecto a la LB (3.5%).



Para El Alto, de las 342 entrevistadas, solamente 13 (3.8%) mencionaron todas las alternativas buscadas. Sin embargo, mencionaron 3 de las 4 respuestas buscadas en un 29% (99 de 342) y, 2 de las 4 respuestas buscadas en un 47% (161 de 342).

El resultado general como proyecto es del 48.8% superando la meta de 30%.

Porcentaje de madres de niños de 0 a 23 meses de edad que refieren se lavan las manos con jabón u otro detergente :
Antes de preparar lo alimentos, Antes de alimentar a los niños
Después de defecar
Después de atender a un niño que haya defecado
EL ALTO



LOS ANEXOS

C. Evaluation assessment methodology

The lead evaluator used a participatory approach. Then he engaged the whole project team in the evaluation process. The first step was to involve the team in planning the evaluation. The lead evaluator began by reviewing the USAID evaluation guidelines. Within the framework of the guidelines he asked the project team to identify what they accomplished, including the things that were still in process. As an individual identified an activity it was written on a flip chart. The whole group was then asked to list the indicators that could verify that activity. In a large group discussion format the lead evaluator went around the room asking project team members to identify an activity and list indicators. The result was a series of flip chart pages with activities and indicators that could verify each one.

The flip chart pages were then organized into evaluation topics and placed together on a wall of the meeting room. The project team was divided into small groups and each group was assigned an evaluation topic. The task of the small groups was to plan how they would collect information about that topic. In preparation for this task the lead evaluator gave them a framework for their task. They were asked to identify who, or what group of people (i.e. mothers, health center staff, village leaders, etc) could contribute information about the topic. For each group they then made a list of questions about the evaluation topic.

These questions in turn served as the basis for writing survey instruments. For this task the workshop participants were charged with creating a survey for a specific population, e.g. mothers, health volunteers, etc. The lead evaluator gave the groups guidelines and directions for writing a survey. He also made the rounds of the groups to give specific instructions. As a small group completed a draft of their survey it was reviewed by the lead evaluation and then revised by the group.

For data collection the evaluation team was organized into teams and assigned groups (mothers, etc.) for conducting interviews.

Data analysis was also done in a participatory mode. Working in small groups the team entered data from the surveys on to data tables. Then they were shown how to organize data into tables and graphs. Their tables and graphs were placed on flip charts and pasted to the walls of the meeting room, organized by the survey questions for each target population (mothers, CGVs, village headmen, etc.). The lead evaluator then led the group through an exercise that resulted in the group drawing conclusions and making the recommendations. These served as the foundation for this report.

D. List of persons interviewed

Montero	El Alto
Pregnant women – 27 Mothers – 104 Health volunteers – Health center personnel – 18 School directors – 4 Students (age 15-17) – 72 OTB (elected community leaders) – 9 Municipal authorities – 4	Pregnant women – 17 Mothers – 27 Health volunteers – 3 OTB (elected community leaders) – 12 Students (ages 15-17) – 92 Health center staff – 18 Municipal authorities – 1

CSRA Administrative staff interviewed:

No.	Name	Position
1	Nathan Robison	National Director
2	Ramiro Llanque T	Training Resources Manager
3	Gloria Laime	Financial Manager
4	Maria Elena Ferrel	Technical Manager
5	Javier Baldomar	Human Resource Manager/Administration
6	Raul Burgos	Head of Information System Management
7	Fidel Coaquira	In-Charge of Systems

E. CD with electronic copy of the report**F. Project data sheet form**